Publisher Name	Program Name
Curriculum Associates, LLC	*Texas i-Ready Classroom Mathematics*
Subject	**Grade Level**
Mathematics	7

Texas Essential Knowledge and Skills (TEKS) Coverage: **100%**

English Language Proficiency Standards (ELPS) Coverage: **100%**

Quality Review Overall Score: **212 / 227**

Quality Review Summary

Rubric Section	Quality Rating
1. Intentional Instructional Design	**47 / 53**
2. Progress Monitoring	**24 / 28**
3. Supports for All Learners	**29 / 32**
4. Depth and Coherence of Key Concepts	**23 / 23**
5. Balance of Conceptual and Procedural Understanding	**64 / 66**
6. Productive Struggle	**25 / 25**

Strengths

- 1.2 Unit-Level Design: Materials include comprehensive unit overviews that provide background content knowledge and academic vocabulary necessary for effective teaching, and contain supports for families in both Spanish and English with suggestions for supporting their student's progress.
- 1.3 Lesson-Level Design: Materials include comprehensive, structured lesson plans with daily objectives, questions, tasks, materials, and instructional assessments required to meet the content and language standards. They also 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 provide 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.

- 3.1 Differentiation and Scaffolds: Materials include teacher guidance for differentiated instruction, activities, and scaffolded lessons for students who have not yet reached proficiency, pre-teaching or embedded supports for unfamiliar vocabulary and references in text, and guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.
- 3.2 Instructional Methods: Materials include prompts and guidance to support teachers in modeling, explaining, and directly and explicitly communicating concepts to be learned. They provide teacher guidance and recommendations for effective lesson delivery using various instructional approaches, and support multiple types of practice with guidance on recommended structures, such as whole group, small group, and individual settings, to ensure effective implementation.
- 3.3 Support for Emergent Bilingual Students: Materials provide guidance for teachers in bilingual/ESL programs, support academic vocabulary and comprehension, and include resources for metalinguistic transfer in dual language immersion programs.
- 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.
- 4.3 Spaced and Interleaved Practice: Materials provide spaced retrieval and interleaved practice opportunities with previously learned skills and concepts across lessons and units.
- 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.

- 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

- 1.1 Course-Level Design: Materials do not include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course and lack pacing guides for various instructional calendars.
- 2.1 Instructional Assessments: Instructional assessments are not aligned to TEKS, and do not include standards-aligned items.
- 3.3 Support for Emergent Bilingual Students: Materials do not provide linguistic accommodations for various levels as outlined and lack implementation guidance for bilingual/ESL programs.
- 5.5 Process Standards Connections: Materials do not indicate how process standards are connected throughout the course.

Summary

Curriculum Associates *Texas i-Ready* is a grade 7 Mathematics program. It offers explicit instruction for mathematics acquisition at the grade 7 level. The curriculum provides a multi-faceted approach to teaching mathematics at the grade 7 level, including opportunities for students to learn with manipulatives, models, and abstract thinking. Each unit includes a detailed overview of instruction that provides a review of concepts learned in earlier units, learning and language objectives for each lesson, and strong vocabulary support. The curriculum includes a personalized online learning platform with instruction, practice, and opportunities for games aligned with individual student needs. The resource offers a home and family connection component, which gives families an overview of the learning in each unit and activities to do at home to help support their child's instruction in the classroom. This curriculum thoroughly includes activities to support emergent bilingual students, students who may need reteach opportunities, and those who are ready for extension opportunities through lesson-specific language strategies and differentiated instruction.

Campus and district instructional leaders should consider the following:

- While the product thoroughly teaches grade 6 mathematical concepts and comprehensively addresses the TEKS in most areas, direct alignment to the TEKS is sometimes challenging. Some

educators may need additional support from instructional teams to fully align their instruction with the TEKS and ELPS

- The curriculum has various resources for addressing all students' needs, including English language learners.

Intentional Instructional Design

1.1	Course-Level Design	9/15
1.1a	Materials include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course.	**0/5**
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).	**1/2**
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**

Materials do not include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course. Materials include suggested pacing to support effective implementation within a 160-day instructional calendar. Materials do not include pacing support for alternate calendars, such as 180-day or 210-day instructional calendars. Materials include an explanation for the rationale of the unit order as well as how concepts connect throughout the course. Materials include guidance, protocols, and 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 i-Ready Classroom K–8 Teacher Toolbox and program implementation materials include pacing guidance for the year and a unit overview outlining concepts, knowledge, and topics taught throughout each unit aligned to the TEKS. The materials did not provide a scope and sequence of ELPS or TEKS taught within the course. Process standards are labeled throughout the units, though they are not the process standards in the TEKS.
- The Texas Ready Teacher Toolbox program implementation and the TEKS and ELPS Standards Correlations provide correlation charts that outline alignment to TEKS and ELPS breakouts in each lesson and process standards throughout the resource. Links include examples of the TEKS and ELPS breakouts being addressed within course materials. However, breakouts are not used for instructional purposes, only for IMRA standards alignment review. The document does not include a scope and sequence.
- The materials do not contain a readily available scope and sequence. To access a scope and sequence, educators must request one directly from the publisher. The IMRA Navigation Guide and Components List | Math K–2 _ Texas i-Ready Classroom Mathematics states within

the description of the scope and sequence source, "The Scope and Sequence is available to educators per request with either the school's sales rep or partner success manager."

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 provide pacing guidance for the year within the *Teacher's Guide* to accommodate a 160-day instructional calendar.
- The materials include pacing guidance for a variety of instructional models, such as 4-day instructional weeks and extended math blocks within the "Alternate Schedules with *i-Ready* Classroom Mathematics" guide.
- The materials guide how to customize pacing within *i-Ready Success Central*.
- The materials do not provide suggested pacing for varied instructional calendars, such as the 180-day or 210-day calendar.

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

- The unit overview provides a rationale for the order of concepts in the course by including prerequisite knowledge for concepts that will be introduced and activities teachers may utilize before and after the unit to help students make connections between essential ideas.
- The *Teacher's Guide* includes a unit overview and lesson progression chart that provides a walkthrough explaining the planning and support features in each unit and the progression of previous, current, and future lessons to help students make connections.
- *i-Ready Success Central* features priority topic overview videos that provide a brief overview and explain the rationale behind the sequencing of units and lessons.

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

- The *Teacher's Guide* contains a unit overview offering resources to help teachers internalize the unit and the lesson. It includes the academic vocabulary used throughout the lesson and unit and the prerequisite skills students have already learned.
- The unit overview gives pacing guidance for each lesson section, provides objectives and standards for learning and language goals, offers options for math vocabulary, details a learning progression that connects previous, current, and future grade levels, and includes leveled differentiation within the unit and lesson.
- The *Teacher's Guide* and "Teacher Toolbox" include a "Math Background" Section that guides teachers into a deeper internalization of the concepts and skills that students will learn throughout each lesson and unit. This section discusses unit themes, prior knowledge, and insights on essential mathematical ideas.
- Before each unit, a section titled "Prepare for Unit" guides unit internalization. For example, "Prepare for Unit 1" provides recommendations regarding academic vocabulary, instructional routines, language support, and lesson delivery.

- *i-Ready Success Central* includes a “Plan and Pace” Section that provides interactive templates to support pacing instruction, unit planning, lesson planning, and session planning.

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

- *i-Ready Success Central* includes a “Professional Growth” Section that provides instructional leaders with the guidance and resources needed to conduct effective learning walks. Examples of resources provided include: "Conduct a Learning Walk: Pre-planning," "Try, Discuss, Connect Classroom Visits Bundle," and "Conduct a Learning Walk: Reflect." The materials also include articles provided for administrators: "What is a Learning Walk?" and "How Can I Conduct a Learning Walk?"
- Within *i-Ready Success Central*, the materials include guidance and resources to help district leaders and school administrators facilitate professional development sessions, conduct learning walks, facilitate data analysis meetings, and help them understand the general flow of the program layout and how it fosters student learning.

Intentional Instructional Design

1.2	Unit-Level Design	4/4
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.	**2/2**
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**

Materials include comprehensive unit overviews that provide the background content knowledge and academic vocabulary necessary to effectively teach the concepts in the unit. 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 *Teacher's Guide* includes a general overview of the unit's structure and each lesson. This overview provides pacing guidance for each section within a lesson, objectives and standards that identify learning and language goals, math vocabulary options, a learning progression referencing connections across previous, current, and future grade levels, and leveled differentiation embedded within the unit and lesson.
- The materials include resources to help teachers internalize both the unit and the lesson by providing the academic vocabulary used throughout the lesson and unit, and prerequisite skills that have been introduced to students previously. The lesson progression page helps teachers understand the sequence of lessons, including what students have already learned or will learn in the future.

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

- In the *i-Ready Classroom Mathematics Family Center* and the *Spanish Family Center*, there is a family guide that provides an overview of *i-Ready*, a video explaining the learning in each unit, and family letters with activities for home practice for each lesson. These resources are available in English and Spanish.
- Within *i-Ready Success Central*, the materials include an “Introduce *i-Ready* Classroom Mathematics to Families” guide in English and Spanish. The guide provides families with resources for getting started, supporting their students at home, how to familiarize themselves with the lesson framework, and practice problems.
- In the “Teacher Toolbox,” each lesson has a “Family Letter” that informs families what students are learning and includes an activity that families can do together. These family

letters are available in English and Spanish, as well as Arabic, Korean, Mandarin, Portuguese, Russian, Tagalog, and Vietnamese.

- *Conocer sobre i-Ready Classroom Mathematics* includes a variety of resources to help families talk with their students about math, including instructions on how to use *i-Ready* at home, a description of how students use *i-Ready* at school, and math dialogue cards.

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**

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. 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 extended practice (e.g., homework, extension, enrichment).

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 lesson plans within the materials include content objectives and language objectives. The materials include a lesson plan in the form of a lesson overview at the beginning of each unit. This overview includes daily objectives aligned with both content and language objectives and incorporates learning and language goals. This overview also includes a variety of leveled questions for teachers to ask throughout the lesson.
- The lesson overview lists the Mathematical Process Standards for content, and language objectives that are addressed throughout each session contained within that lesson. For example, the One of the content objectives is “Use scale factors to redraw a scale drawing with a different scale,” and a language objective that states “Understand the term scale drawing and use it to describe figures with side lengths in equivalent ratios.”
- The materials provide tasks for students to complete within a suggested pacing timeline. The materials provide a list of materials for both teachers and students to complete the lesson. Also, there are suggestions for digital integration. Daily lesson plans are structured and detailed. The lesson plans delineate how lesson activities should be paced and distributed across multiple sessions, when applicable.
- The materials include a variety of assessments with each lesson, such as “Exit Tickets” and lesson quizzes. Each lesson includes a digital comprehension check. Each lesson includes a

digital comprehension check. For example, “Lesson 10, Session 1” includes an “Exit Ticket” question that tasks students with reflecting on how finding the distance between two numbers on the number line is like and unlike finding the difference between two numbers, which relates to the content objective of solving addition and subtraction problems involving negative numbers, as well as the language objective of explaining solution strategies to subtraction problems with negative numbers using lesson vocabulary and academic language. The “Lesson 10” quiz includes a correlated task that requires students to explain how they can tell if the value of an expression is positive or negative, without calculating the answer.

- The lesson plan materials within the *Teacher's Guide* include differentiated questions for teachers to ask students based on their language proficiency level. For example, in “Lesson 1, Session 2,” the materials guide teachers to help students make sense of the “Connect It” Section to differentiate for English learners. One of the three levels reads, “Next, ask students to describe the figures in the next problem and how they are related using scale, scale drawing, and scale factor. Ask: ‘How are the figures alike? How are they different? What sides of the figures can you use to find the scale?’”
- The lesson plan materials within the *Teacher's Guide* include questions for teachers to ask students that are aligned with content standards and objectives and provide teachers with sample responses to listen for from students. For example, in “Lesson 1, Session 1,” one of the question prompts to facilitate a whole class discussion states “Ask: ‘How do [student name]’s and [student name]’s strategies work to determine which triangle is the same shape as triangle A’ Listen for: ‘Both strategies analyze and compare the side lengths . . .’“ This directly supports the content objective of understanding that scale drawings are figures with side lengths in equivalent ratios, as well as the language objective of explaining strategies for finding an unknown length in a scale drawing or in the object it represents using the lesson vocabulary.

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

- The materials include a lesson overview for each lesson. Each lesson is divided into parts called sessions. The materials provide suggested timing for each session and break down that timing for each component of the session.
- *i-Ready Success Central* provides guidance on how to customize pacing. For example, the “Plan and Teach” Section provides links to articles, such as "Set the Pace for Your Year" and "Discover Opportunities for Flexibility in Teaching."

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

- The materials provide lesson overviews that include a list of student and teacher materials that are needed for that session. For example, a sample session lists materials for students as geoboards, grid paper, tracing paper, and unit tiles, and materials for teachers as presentation slides. The materials also list the materials that students will need for differentiated parts of the lesson.

- The lesson overview includes a table that provides a list of daily materials. The "Math Toolkit" refers specifically to items that are needed for students, while the “Presentation Slides” icon refers specifically to items that are needed for teachers.

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

- The materials routinely incorporate activities titled “Reteach,” “Reinforce,” and “Extend.” These activities are designed to be used as needed while students learn at their own pace.
- “*i-Ready* Personalized Instruction” allows students to work independently and at their own pace, based on the results of the *i-Ready* diagnostic test.
- The lesson overview located in the *Teacher's Guide* includes a “Differentiation” tab. This tab includes guidance on implementing various lesson parts in the “Prepare,” “Reinforce,” “Reteach,” “Extend,” and “Optional Add-on” Sections in each session. For example, in a session sample, interactive tutorials are listed in the “Prepare” Section, fluency and skills practice are listed in “Reinforce,” and *i-Ready* personalized instruction is listed in the “Optional Add-on” Section.
- The materials include guidance for teachers on incorporating lesson materials to reteach, reinforce, enrich, and extend student learning. Within each session, there are differentiation boxes that are linked to different questions within either the “Try It,” "Model It," or “Connect It” Sections that provide the teacher with suggestions on how to reinforce, reteach, or extend the information depending on how students respond to those questions.
- At the end of each session, the materials include additional practice with the suggestion to either assign it in class or as homework and further implementation guidance if the teacher assigns the additional practice during the class period.

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.	**2/2**
2.1d	Diagnostic, formative, and summative assessments are aligned to the TEKS and objectives of the course, unit, or lesson.	**4/6**
2.1e	Instructional assessments include standards-aligned items at varying levels of complexity.	**0/2**

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 include the definition and intended purpose for the types of instructional assessments included. Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments. Diagnostic assessments are aligned to the TEKS and objectives of the course, unit, or lesson. Formative and summative assessments are aligned to the objectives of the course, unit, or lesson. Formative and summative assessments are not aligned with the TEKS. Instructional assessments meet the requirements for varying levels of complexity but are not aligned to the state standards.

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.

- The materials include a diagnostic assessment that guides teachers in personalizing student learning and making instructional decisions based on the data. The diagnostic assesses skills above and below students' chronological grade level. The assessment is administered at the beginning, middle, and end of the year and teachers can track student proficiency and growth. The results determine a personalized learning pathway of online lessons for each student.
- The materials include diagnostic, formative, and summative assessments at the unit level. A diagnostic assessment for the beginning of the course can be found within the i-Ready online materials. Additionally, each unit contains a "Prepare for the Unit" page just before the unit overview for students to complete individually, in groups, or in pairs. Each unit contains a variety of formative assessments called "Cumulative Practice," which include short answer, free response, and multiple-select type questions. Within the unit review, students complete a performance task to show mastery of concepts. The materials contain two versions of an

end-of-unit assessment that contain various question types such as numeric response, multiple-select, and multiple-choice.

- The materials include diagnostic, formative, and summative assessments at the lesson level. Each lesson begins with a lesson starter, such as “Which One Doesn’t Belong,” “Same and Different,” and other brief checks for understanding. The checks for understanding provide suggestions for teacher responses based on student responses. Each section of the lesson, “Apply It,” “Connect It,” and “Model It,” includes questions designed for the teacher to assess and respond to student understanding, along with breakout boxes labeled “Reteach,” “Reinforce,” or “Extend.” The materials include unit assessments and digital comprehension checks at the end of each unit. These assessments are summative.
- The materials include “Exit Tickets” within each session for teachers to assess students' understanding. For example, “Lesson 3” has an “Exit Ticket” for each session that varies by type. In “Session 1,” students are asked to determine if there is a proportional relationship between quantities in a provided table. In “Session 2,” students are asked to use a model of their choice to show a proportional relationship with a constant of proportionality of four. In “Session 3,” students are asked to explain how a recipe has a proportional relationship between the number of cups of flour and the number of cups of sugar.
- The materials include a lesson quiz at the end of each lesson and a digital comprehension check that can be assigned in place of the lesson quiz. Both assessments include various question types, including multiple-choice, short-answer, numeric response, and multiple-select. For example, the quiz for “Lesson 6” includes five total questions. Two of the questions are multiple-choice, one is a griddable, and the remaining two are open-ended questions where students are asked to calculate an answer and show their work.
- The *Teacher’s Guide* includes a “Resources for Assessment” Section detailing the types of assessments in the unit, when to use the assessments, where to find the assessments, and related digital assessment reports. The assessment types include diagnostic, lesson quizzes (print) or comprehensive checks (digital), unit assessments (print) or comprehensive checks (digital), and the option for assessment practice.
- The “Teacher Toolbox” includes a “Classroom Resource” Section that provides lesson quizzes and unit assessments through the progression of the units. Teachers have three options for administering the lesson quizzes. Teachers can assign the printed view in Google Classroom, assign a student to fill in the answers in Google Classroom, or the teacher can edit and print the quiz. The unit assessments offer the same options as the lesson quizzes; however, forms A and B are offered. The question types in quizzes and unit assessments vary between multiple-choice, choose all that apply, fill-in-the-box, and open-ended questions.

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

- The materials include definitions for the diagnostic assessments and comprehension checks within *i-Ready Success Central*. The “Resources for Assessment” guide provides a brief outline of each type of assessment, its intended purpose, components of the assessment, where to locate it within the materials, and when and with what frequency each type should be used. The materials also list digital alternatives for certain assessments, such as the lesson quizzes.

- The materials provide the teacher with a purpose for what each lesson quiz is assessing. The *Teacher's Guide* includes an "Error Alert" Section which outlines potential errors that students could make. The *Teacher's Guide* also provides a "Purpose" Section for each performance task, "Explore," and "Develop" Sections.
- The materials provide clear definitions of different types of assessments, such as comprehension checks and the *i-Ready* diagnostic assessment within *i-Ready Success Central*.
- The materials include an "Assessment Opportunities Reference Sheet'' within *i-Ready Classroom Mathematics* that describes the diagnostic as "an adaptive digital assessment that determines proficiency and growth," and the unit assessments as tools to "assess students' cumulative understanding of concepts and skills." The materials in the *Teacher's Guide* provide clear instructions on utilizing formative assessments to monitor and adjust instruction. For example, the "Discuss It" question in "Lesson 8, Session 1" guides teachers on utilizing question prompts with paired discussions and how to address misunderstanding for the particular question.

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

- The materials include "Resources for Assessment and Differentiation," which outlines when each assessment should be administered.
- *i-Ready Success Central* includes a "Manage the Diagnostic" guide in the "Learn the Basics" Section under "Assess and Use Data." The guide explains the various tasks teachers perform before the diagnostic, during the diagnostic, and before the testing window ends, as well as tasks performed after each diagnostic. This PDF includes diagnostic scheduling information and tips for adding buffer time for transitions, logging in, and viewing tutorial videos.
- The materials contain a "Before, During, and After" checklist for the diagnostic assessment teachers administer to students. This checklist provides guidance on when to administer the diagnostic to students, what preparations to make ahead of administration, what to do while students take the assessments, and what to do once they complete the assessment. Teachers can use the checklist to ensure consistent administration and accurate results.
- The materials include guidance to ensure accurate assessment administration of lesson-level assessments, such as the performance tasks in the unit review at the end of each unit. The "Monitor and Guide" Section provides teachers with information for preparing students before they begin working on the performance task, as well as guidance for facilitating student learning while they complete the task.
- The materials include a "Get Good Data" Section within *i-Ready Success Central* that provides articles such as "Prepare and Proctor" and "Introduce the Diagnostic to Students." Additionally, the materials include tools such as the "Get Good Data Action Plan" and the "Administer the Diagnostic Checklist."
- The materials include a unit assessment scoring guide that guides multiple methods of scoring, including scoring by item points and scoring by the rubric.

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

- The materials include a diagnostic assessment that is aligned to the TEKS and objectives of the course. The materials provide the teacher with vertically aligned TEKS that the students are ready to utilize based on their responses.
- The materials include an "*i-Ready* Diagnostic TEKS Performance Report" that uses the results to assess mastery of 100% of grade-level TEKS. The "TEKS Performance" table uses a skill summary to display the results. This table lists the TEKS and score by using a rubric displaying the number of students "likely to understand the skill," "partially understand the skill," or "likely to not understand skills" aligned to the TEKS.
- The materials include a prerequisite guide aligned to each unit and lesson objectives, which teachers can use to determine necessary whole-group instructional adjustments based on the student diagnostic assessment results.
- The materials include formative assessments as additional practice, "Exit Tickets," and checks for understanding, and are aligned with the course, unit, and lesson objectives. For example, "Lesson 8, Session 1" includes the objective "Add positive and negative integers, fractions, and decimals." "Lesson 8, Session 1" includes a variety of assessment questions. The session begins with a formative assessment in the form of an "always, sometimes, never" question that has students evaluate statements regarding addition and subtraction of rational numbers and whether the solutions are positive or negative. Next, the session includes a partner discussion question about the steps students must take to solve a real-world problem involving integers. The "Exit Ticket" asks students to write an addition expression to match the provided number line model, and the additional practice within the session includes multiple open-ended questions utilizing models and manipulatives where appropriate. The varied questions relate to adding positive and negative integers, fractions, and decimals.
- The materials include lesson quizzes and unit assessments that serve as summative assessments. These summative assessments are aligned with the course, unit, and lesson objectives. For example, the "Lesson 8" quiz aligns with the objectives of adding positive and negative integers, fractions, and decimals, and offers five questions: one multiple-choice, two open-ended, one table involving classifying sums as positive or negative for four different expressions, and one griddable question.
- The materials provide formative and summative assessments throughout the materials that are not aligned to the TEKS.
- The materials in the *Teacher's Guide* provide the answer keys for every unit assessment and lesson check but do not provide a TEKS correlation. It is not possible to determine whether the materials assess all state standards as the TEKS correlation is not provided.

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

- The materials include instructional assessments with varying levels of complexity. These instructional assessments are not aligned with the state standards.
- The materials include a variety of assessments that contain at least two levels of complexity. The unit assessments and lesson quizzes list the depth of knowledge (DOK) levels next to each

item. Most items are at a DOK level of either 1 or 2. For example, the quiz for “Lesson 17” has five questions: two at the DOK 1 level, two at the DOK 2 level, and one at the DOK 3 level.

- The materials include assessments with more than two levels of complexity. The performance tasks in each unit review contain DOK levels of 3. The formative assessments, such as the “Apply It,” “Model It,” and “Explore” Sections, contain items that have DOK levels at 1, 2, and 3.
- The materials include unit assessments with items that vary in rigor and format. For example, the “Unit 4” assessment includes four DOK 1 questions, twelve DOK 2 questions, and two DOK 3 questions, while the unit review also includes a DOK 3 performance task.
- The materials include digital comprehension checks that include a variety of technology-enhanced items, such as inline choice and open-response. For example, the grade 7 comprehension check "Understand Proportional Relationships" includes multiple-choice, open-response, and equation editor items.

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**

Instructional assessments and scoring information 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 guidance to teachers for interpreting student responses from assessments. Formative assessments, such as the "Apply It" and "Model It" Sections, provide misconceptions students might have based on potential responses to questions within those sections. For example, the "Model It" question in "Lesson 3, Session 2" asks students to describe how the provided table shows a proportional relationship. A suggestion is provided to help students correctly write a rate if it is written incorrectly. In "Session 3," the "Apply It" question requires students to analyze and justify whether the given information is correct. Teachers are guided toward possible misconceptions and which models might be helpful to use with students to help them gain a better understanding.
- The materials provide summative assessments, such as lesson quizzes and unit assessments, that include a rationale and potential misconceptions for questions and answer choices. For example, the "Lesson 6" quiz includes a rationale for each correct and incorrect answer for the multiple-choice questions, a rubric for evaluating student responses on open-ended questions, and suggestions for potential strategies that could be used or retaught for students who might need additional assistance.
- The materials provide a section called "Responding to Student Needs" in the T*eacher's Guide*, next to each unit assessment. This section provides suggested areas of learning gaps and materials to support instruction for students who may need it. It also includes extension activities for students who exceed proficiency on the unit assessment.
- The materials provide suggested activities teachers can provide to students based on their performance. These are found within a box in the *Teacher's Guid*e under each lesson quiz.
- The materials in the *Teacher's Guide* provide a comprehensive answer key for each lesson quiz that explains correct and incorrect answer choices. For example, the answer key for the "Lesson 6" quiz demonstrates one method of solving the problem but also gives teachers

other ways the problem could be solved correctly. On a multiple-answer question, the answer suggests how the problem could be solved, a rationale for the correct answer(s), and a rationale for why each additional choice is incorrect. The rationale for choice D states, "D is not correct. This answer represents using the diameter in place of the radius in the area formula."

- The materials in the *Teacher's Guide* explain how to utilize formative assessments to monitor and adjust instruction. For example, "Model It" from "Lesson 2" explains how to assess conceptual understanding by asking students to create and analyze a model.
- The "Data Analysis Guide" in *i-Ready Classroom* has a section in question-and-answer format outlining how to use class data from the diagnostics and other assessments. The materials guide teachers on using data to group students and plan their instructional priorities, strategically adding teacher-assigned lessons, or using additional practice worksheets from the "Teacher Toolbox."
- The materials include a "Reports" Section for the diagnostic assessment which offers an instructional grouping section. Students are grouped based on overall placement and scale score. A grouping description provides an indicator of below grade level, at grade level, or above grade level in each specific standard. Additional differentiated instruction is outlined based on instructional priorities. An example states, "Students with a low score in Number and Operations are probably most challenged by fractions. They will need to focus on foundational fraction concepts." The report offers recommendations for teacher-led instruction and provides tools for instruction for the recommendations.

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

- The materials guide when and how to use the included tasks and activities when responding to students' performance on formative assessments. Next to various questions throughout the materials, there are breakout boxes that indicate to a teacher when a reteach, a reinforcement, or an extension may be needed. The materials guide teachers in facilitating students' learning with these tasks. For example, in "Lesson 10, Session 1," a hands-on activity is provided for reteaching or reinforcing how to use a number line to model subtraction, supporting the learning on the "Connect It" section where students are expected to add and subtract integers.
- The materials include reteaching activities along with each lesson of *i-Ready Classroom,* which is recommended for use when students do not succeed on a lesson quiz or unit assessment. For example, the reteach activities for the "Lesson 7" quiz recommend three tools designed to help students master prerequisite skills for finding the area of circles, such as multiplying fractions, finding the area of a parallelogram, and finding the area of plane figures.

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

- The materials include a "Personalized Instruction Progress and Reflection" template for students within *i-Ready Classroom*. Students use the chart to track their progress on "*i-Ready*

Personalized Instruction." Once a lesson is completed, students record the date and the lesson name, then click boxes to represent their lesson score.

- The materials include pledge templates within *i-Ready Success Central* that students fill out with their pledge goals to do their best on *i-Ready*, allowing students to set goals and measure progress. A "Mathematics Bucket List" template is also included for students to set academic goals throughout their learning.
- The materials include daily learning reflection templates in "Build Classroom Culture" within *i-Ready Success Central*. Students reflect on their strengths and areas for growth and write any lingering questions on the day's lesson.
- The materials include several tools within *i-Ready Success Central* that utilize assessment data to facilitate student-centered goal-setting. For example, "Tips to Engage Students in Data Chats" provides questions to ask students during student-teacher conferences to help them track their progress and growth.
- The materials provide end-of-unit materials including a "Student Self-Reflection" activity that summarizes the key concepts and skills that students learned throughout the unit and guides them through evaluating their understanding of each.

Supports for All Learners

3.1	Differentiation and Scaffolds	8/8
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)	**2/2**
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.	**3/3**

Materials include teacher guidance for differentiated instruction, activities, and paired (scaffolded) lessons for students who have not yet reached proficiency on grade-level content and skills. Materials include pre-teaching or embedded support for unfamiliar vocabulary and references in text (e.g., figurative language, idioms, academic language). Materials include teacher guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency 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 materials include a "Yearly Pacing Prerequisites" document that guides teachers on differentiating whole-group and small-group instruction for students who have not yet mastered the prerequisite skills embedded within the grade-level content. The document also provides guidance for teachers on which prerequisite lessons to use and where they can be integrated into the pacing calendar. The materials break down this information in the "Unit and Lesson Support" document, which details what exact skills will be addressed.
- At the beginning of each unit, the materials include a "Unit Resources" document that lists the activities the teacher can use to differentiate before, during, and after the lesson. Within the unit overview, materials include teacher guidance by providing "Reteach or Reinforce" activities under the lesson-level "Differentiation" tab. Each lesson consists of sessions, and within each session, pop-out boxes provide the teacher with activities to reinforce or reteach the grade-level material should students need additional support to master the grade-level content. For example, in "Lesson 1, Session 3," "Differentiation: Reteach or Reinforce" reads, "If students are unsure about the use of scale factors in calculating area, have them build and analyze a scale model of a sidewalk and a patio." Additionally, after each lesson quiz and unit assessment, there are activities provided for the teacher to reteach, reinforce, or extend student learning based on student mastery of concepts.
- The lesson overview in the *Teacher's Guide* includes a "Differentiation" Section. This section provides a "Reteach or Reinforce" component that offers suggestions such as using a visual

model, hands-on activities, or fluency and skills practice for students who have not yet reached proficiency.

- In the "Prerequisite Report Overview," the materials provide a report that groups students based on the content support they need. The materials support teachers by guiding the concepts and lessons students in each group are ready to begin working on. Under the "Reinforce" tab within the "Teacher Toolkit," the materials include center activities that are scaffolded for on-level students, below-level students, and above-level students. Under the "Refine" Section of the *Teacher's Guide*, the materials also provide guidance for teachers on how to scaffold instruction based on student needs. For example, in "Lesson 1, Session 5," the "Refine" tab reads, "Identify grouping for differentiation based on the Start and problems 1. A recommended sequence of activities for each group is suggested below."
- Each lesson within the materials includes "Differentiation" and "Reteach or Reinforce" components. This text feature provides guidance on differentiating lessons for students who have not reached proficiency yet. For example, a "Visual Model" for "Lesson 7, Session 2" explains how to use a number line to model integer addition.
- The materials provide frequent guidance regarding common misconceptions. For example, the "Common Misconception" box for the "Lesson 7" "Model It" Section warns that students may think that the sum of two integers is equal to the number of zero pairs formed in the addition process. It then recommends strategies to help avoid this misconception.
- *i-Ready Success Central* includes a "Differentiate" Section that provides a *Planning and Teaching with i-Ready Classroom Mathematics to Accelerate Learning* guide. This guide offers specific recommendations in sections titled, "Know the Content," "Know Your Students," and "Make a Plan and Teach." The guide also includes ideas on structuring instructional time for whole-class instruction, rotations for differentiated support, and opportunities for additional support. At the end, the guide includes a small group differentiation template to help determine and plan the number of groups and rotations used.
- *i-Ready Success Central* provides teachers with a "Personalized Instruction Worksheet" to plan action steps for setting up online lessons based on student's data from the diagnostic assessment.

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

- The interactive tools in the "Teacher Toolkit" provide pop-ups for academic vocabulary that students will see throughout the activity. These pop-ups include definitions and examples. The tools also include text-to-speech embedded within each problem and the option to provide closed captions for students who need them. The *Teacher's Guide* provides resources for supporting students with unfamiliar academic vocabulary in the "Develop Academic Language" Sections. These are embedded throughout each lesson and designed to support students' understanding of the academic vocabulary. For example, "Lesson 3, Session 2" reads, "Why? Support students in justifying their ideas, solutions, and strategies. How? Discuss with students what it means to justify their ideas . . ." The "Prepare For" Section of the materials includes a subsection called "Support Vocabulary Development" that lists the vocabulary in the lesson and has students use a graphic organizer to define the vocabulary in their own words and provide examples. The *Teacher's Guide* provides guidance on

implementing the activity with students. For example, in "Lesson 3, Session 1," the guidance reads, "Ask students to consider the term equivalent ratios. Ask what words are similar to equivalent. Students will likely notice that it is similar to the word equal."

- The materials utilize the three-read model to help students make sense of unfamiliar references in various texts. Additionally, the materials provide images to help students make sense of some of the non-academic references made in the text. For example, the "Lesson 4, Session 1" "Try It" Section reads, "Before students work on Try It, use Three Reads to help them make sense of the problem."
- The *Teacher's Guide* provides guidance on differentiating instruction for English learners. This guidance utilizes best practices for supporting students in mastering unfamiliar academic vocabulary. For example, "Lesson 20, Session 1," "Levels 2–4: Speaking/Reading" advises, "Review the meaning of row and column using gestures. Have the students practice by playing a short game where the teacher says show me a row and students orient their arms or pencils like a row. Repeat with column."
- Each lesson begins with a list of relevant vocabulary words that are new to the lesson, as well as a list of previously introduced vocabulary words. Additionally, "Develop Academic Language" boxes are distributed throughout the lesson. These boxes include guidance for supporting students in mastering specific vocabulary words necessary for that lesson.
- The "Lesson Overview" in the "Teacher Toolbox" includes a "Connect to Language" Section for supporting English learners. Three levels of support include "Levels 1–3: Speaking/Listening," "Levels 2–4: Speaking/Listening," and "Levels 3–5: Speaking/Listening." Each section provides specific instructions for scaffolding the language in each session. For example, "Lesson 1," "Solve Problems Involving Scale," "Levels 1–3: Reading/Speaking" instructs teachers, "Using a Co-Constructed Word Bank, read the problem aloud and have students circle unknown words and phrases, like larger, smaller, same exact shape, and original figure. Review selected terms with students."
- The "Lesson Overview" provides a "Start" Section, which includes a short activity to help students connect to prior knowledge. For example, in "Lesson 1, Session 1," "Explore Scale Drawings," students analyze graphic organizers to recognize how the characteristics of the sketches of four different triangles are the same and different. Possible student solutions are included with this activity. This activity supports students' ability to describe and compare triangles using vocabulary words.
- The "Lesson Overview" includes a page with an assignment that supports vocabulary development. For example, "Lesson 1, Session 1," "Prepare for Solving Problems Involving Scale" includes a graphic organizer that helps students organize their information about the math term *unit rate*. The words *unit rate* are in the middle of the page. Five boxes branch out from the words *unit rate,* forming subheadings. The first box is "What Is It," in which students define the term in their own words. In the "What I Know About It" box, students write what they know about unit rate, and in the last three boxes, students provide examples of three different representations of unit rate. Teachers can pair students to complete the graphic organizer and then share their work with the class. This leads to a comparative discussion of the definitions, examples, and descriptions of unit rates.

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 guide teachers in grouping students based on their responses to the "Warm-up" or "Exit Ticket" and provide resources for differentiating instructions for each group. Teachers design three pathways based on the student's level of success: approaches proficiency, meets proficiency, or extends beyond proficiency. For example, in "Lesson 1, Session 5," the "Refine" Section reads, "Identify grouping for differentiation based on the Start and problems 1. A recommended sequence of activities for each group is suggested below."
- The materials include extensions designed to deepen students' understanding of the concepts they are learning. The end of each unit offers "Math in Action" extensions where students utilize new skills by applying them to real-world scenarios.
- The *Teacher's Guide* includes a "Lesson Quiz Differentiation" Section, which provides enrichment activities for students after each lesson quiz. The materials also provide enrichment activities to use after each unit assessment. The "Teacher Toolkit" offers enrichment activities for each lesson and an answer key that includes sample student responses.
- The materials include "Challenge" activities within each unit that extend student learning. Additionally, practice problems are rated "Basic," "Medium," or "Challenge," so educators can differentiate instruction based on demonstrated proficiency.
- The "Lesson Overview" provides a differentiated "Extend" activity for students who demonstrate proficiency in grade-level content and skill. For example, in "Lesson 2, Session 2," "Develop Solving Problems with Unit Rates for Ratios with Two Fractions," students deepen their understanding by looking for and using structure in unit rates. The activity prompts students to think about the order in which quantities are compared in ratios and unit rates. Students are asked to define *reciprocal* and discuss whether it describes a given ratio and its reciprocal.
- The "Reinforce" tab in the "Teacher Toolbox" provides on-level and above-level hands-on math center activities to reinforce the concept. In "Lesson 2: Find Unit Rates Involving Ratios and Fractions," the on-level activity enforces the use of vocabulary for unit rates and fractions. In the "What You Do" Section, students read the problem on the "Recording Sheet" and think about how to solve it. Students use words from the word bank and numbers from the number bank to fill in the blanks. In the "Check for Understanding" Section, students read a problem and use the vocabulary for unit rates and fractions to explain how to solve it. In the "Go Further" Section, students use the words from the word bank to write a general explanation of how to calculate unit rate given a complex fraction. The instructions include a list of materials needed to complete the activity.
- The "Extend" tab offers enrichment activities for each lesson in a unit. For example, "Running Mates" is the enrichment activity in "Lesson 2," "Find Unit Rates Involving Ratios and Fractions." Students answer questions based on the data given in the challenge.

Supports for All Learners

3.2	Instructional Methods	13/13
3.2a	Materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly).	**6/6**
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**

Materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concepts to be learned explicitly. Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches. Materials support multiple types of practice, such as guided, independent, and collaborative, and include guidance for teachers and recommended structures, such as whole group, small group, and individual 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 materials provide prompts and guidance to support the teacher in modeling concepts with students using concrete models within the differentiation boxes found throughout each lesson. For example, in "Lesson 4, Session 1," "Differentiation: Reteach or Reinforce" asks students to represent proportional relationships using sticky notes with values written on them.
- The materials provide prompts and guidance to support the teacher in explaining concepts directly and explicitly to students in the "Refine" Section of the *Teacher's Guide*. For example, in "Lesson 4, Session 4," the following guidance is provided to teachers: "Guide students in understanding the example. Ask: The line passes through the origin. What does this tell you about the line?" In the "Connect It" Section of the materials, prompts and guidance are provided for teachers to explain the concepts presented in the "Model It" Section and to help students make connections between these concepts and their learning. The *Teacher's Guide* provides sample responses for each question to support teachers in knowing how students should respond to the materials.
- In the "Develop," "Picture," and "Model It" Sections of the materials, prompts and guides are provided to teachers to communicate concepts students will learn. The materials guide the teacher in selecting samples of students' work and offer prompts on communicating with students, including questions to ask students and samples of the types of responses teachers should hear. For example, in "Lesson 4, Session 2," the following guidance is given to teachers: "Rephrase the problem: Look at the lines for Company A and Company B. How are the lines the same? How are they different?"

- The "Facilitate Whole Class Discussion" component of each lesson explains how to use classroom dialogue to communicate concepts students will learn. This box explains in detail what to ask and what to listen for.
- Each lesson includes components titled, "Differentiation: Reteach or Reinforce" or "Differentiation: Extend." These text features explain how to use models to extend and reinforce learning. For example, the "Differentiation: Reteach or Reinforce" "Visual Model" for "Lesson 7, Session 2" explains how to use a number line to model integer addition.
- The "Tools for Instruction" activities in the "Reteach" tab offer guidance and prompts to support the teacher in explaining the concepts to be learned explicitly. The "Reinforce" activity, "Identify Proportional Relationships," includes the following steps: test a table, observe a graph, and check an equation to examine proportional relationships. For example, the "Observe a Graph" Section explains that if a set of ordered pairs can be connected by a straight line through the origin, there is a proportional relationship between the variables. Teachers are guided to instruct the students to graph the ordered pairs from the table. Teachers are prompted to ask, "Do all of the ordered pairs lie on the same line? (yes) Then ask, "Does the line go through (0, 0)? (yes) Explain that, because the answer to both questions is yes, there is a proportional relationship between the variables."
- The "Lesson Overview" includes the "Protocols for Engagement" table, which displays where in the lesson the teacher can implement instructional strategies for different groupings. In the "Overview" for "Lesson 16," "Use Unit Rates to Solve Problems," teachers can use "Stand and Share" in "Session 2" for "Discuss It: Facilitate a Whole Class Discussion."

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

- The "Lesson Overview" for "Lesson 14, Session 1," "Explore Ratios That Describe Parts of a Whole," includes teacher guidance and recommendations to explore and understand that a dilation is a transformation that makes a scale copy of a figure using a variety of instructional approaches. For example, the "Start" activity, "Which One Doesn't Belong" activates prior knowledge and engages students in mathematical reasoning and discourse by identifying equivalent ratios. Students try the activity individually or with a partner before discussing it with the class. The "Try It" Section includes a "Math Toolkit" that recommends using connecting cubes, counters, double number lines, or grid paper to solve the problem. Before students work on "Try It," teachers use "Notice and Wonder" to help them make sense of the problem.
- The "Lesson Overview" for "Lesson 21," "Understand Multiplication as Scaling," includes a "Connect to Culture" Section which provides guidance on where in the lesson the activities are applied. For example, teachers use the paragraph about Dubai with problem 1 in "Apply It" of "Session 3." An additional paragraph about Yellowstone National Park is used with problem 2 in "Apply It" of "Session 3." The overview also includes "Protocols for Engagement," which includes guidance on using instructional strategies like "Call and Response" to start class and/or bring students back together after breakout work.
- The materials include "Discuss It" boxes which provide instructions on using peer discussions of central ideas as an instructional approach. For example, the "Discuss It" box in "Lesson 7, Session 1" asks students to discuss why they circled both a positive chip and a negative chip

when adding integers. It also advises teachers to listen for specific phrases that indicate student understanding.

- The "Math Toolkit" icon supports hands-on learning by recommending math manipulatives relevant to the concepts addressed in the lesson.
- The *Teacher's Guide* provides guidance on differentiating instruction for English learners. This guidance utilizes best practices for supporting students in mastering unfamiliar academic vocabulary. For example, "Lesson 20, Session 1," "Levels 2–4: Speaking/Reading" advises, "Review the meaning of row and column using gestures. Have the students practice by playing a short game where the teacher says show me a row and students orient their arms or pencils like a row. Repeat with column."
- The materials provide guidance on supporting students by using graphic organizers to develop an understanding of various academic concepts and vocabulary. Throughout each session, "Discuss It" boxes guide the teacher in facilitating think-pair-share. Additional scaffolded questions are provided to ask pairs that need extra support. Each session begins with a "Start" Section. This serves as the entrance ticket or warm-up and comes in a variety of formats such as "Same and Different," "Always, Sometimes, Never," "Which One Doesn't Belong," and "Check for Understanding."
- The materials provide guidance to teachers in facilitating instruction using strategies such as three-reads to help students make sense of the problem. As students read through the problems, the materials prompt teachers to ask students the following questions: "What is the problem about? What are you trying to find out? And what are the important quantities in the problem?" Additionally, each lesson begins with an "Explore" component, which provides teachers guidance on supporting students. Students complete it either individually or with a partner. Each lesson contains a "Deepen Understanding" Section that guides teachers in developing students' problem-solving and reasoning skills. The "Math in Action" Section guides teachers in helping students apply multiple skills from the unit to solve real-world problems.

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

- The materials include multiple types of practice for students. The "Model It" and "Discuss It" Sections allow students to engage in guided practice and collaborative learning. The differentiation boxes help teachers facilitate guided practice using hands-on activities. The "Apply It" and "Additional Practice" Sections are designed for students to work collaboratively or independently. The practice activities expose students to various question types such as multiple choice, open-ended, numeric response, and multiple select.
- The materials, through the "Unit Resources" Section within the *Teacher's Guide*, provide teachers guidance on using the different types of practice with students. It lists the types of print and digital resources and guides the teacher on which are best for guided practice, collaborative practice, or independent practice. The *Teacher's Guide* offers prompts to teachers to guide them on supporting students as they work through each type of practice.
- The materials provide the teacher with recommended structures as students complete each type of practice. The "Model It" Sections are designed to be completed by the whole group as

guided practice. The "Apply It" and "Develop" Sections are designed to be completed in pairs or small groups as students begin to apply their learning. The "Practice" and "Additional Practice" Sections are designed to be completed individually by students. The "Refine" Section guides teachers in grouping students into small groups and providing differentiated instruction to each group. Several documents in the *i-Ready Success Central* guide teachers in planning for small groups, such as "FAQ" and "Small Group Teacher Tool."

- The materials utilize a three-stage lesson routine: "Try It," "Discuss It," and "Connect It." During the "Try It" phase of each lesson, students make sense of problems, practice solving problems, and are encouraged to show the models and strategies they use. The "Discuss It" phase allows students to share their thinking with a partner and compare their problem-solving strategies with their classmates. "Connect It" provides opportunities for students to make connections and apply their thinking to new problems. This routine typically takes 3–5 sessions. Students focus on exploration in "Session 1," development in "Sessions 2–4," and refinement in the final session.
- The materials recommend structures that support effective implementation, including partner discussions, whole group discussions, and opportunities for individual reflection. Each lesson includes teacher guidance to support multiple types of classroom dialogue, including "Facilitate Whole Group Discussion" and "Discuss It" partner discussions. Additionally, each lesson includes a set of practice problems to support independent practice.
- *i-Ready Success Central* includes a guide to small-group instruction. The guide includes multiple videos and planning tools that explain how to use small group instruction to simultaneously facilitate independent reinforcement, student-centered practice, and teacher-led instruction.
- The materials include a "High-Quality Practice Opportunities" document providing multiple types of practice that engage and reinforce students' mathematical thinking. These practices support conceptual understanding, develop fluency, and provide opportunities to apply their learning. Lesson-level practice in the *Student Worktext* includes "Apply It" problems, "Additional Practice," and "Refine" Sessions. "Online Practice Opportunities" include fluency and skills practice, leveled math center activities, and assignable interactive practice. The practice opportunities at the unit level offer unit games, unit reviews, and cumulative practice. Students have additional online practice opportunities through learning games such as "Hungry Fish," "Match," and "Cloud Machine."
- Materials include the "Try-Discuss-Connect" instructional framework to support the effective implementation of the course's mathematical concepts. With this framework, teachers deliver discussion-based mathematics instruction, which provides students with opportunities to engage in individual think time, partner talk, independent writing, and whole class discourse.
- The materials include a *Student Handbook* that aids teachers in designing a learning environment that helps students focus on the content. The specific purpose of the handbook is for students to create mathematical habits of mind as they think about math ideas and solve problems. For example, "Habit 1" is to make sense of and solve problems. This habit encourages students to look for information in the problem, try different ways to find a solution, and think about which way works best. The handbook also includes a "Mathematical Language Reference Tool," which provides sentence frames to help students talk and write

about math. For example, to ensure active listening, students are encouraged to show they are listening by facing the speaker and nodding when they understand.

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.	**0/2**
3.3b	Materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs.	**0/1**
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.	**8/8**
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**

Materials do not include teacher guidance on providing linguistic accommodations for various levels of language proficiency as aligned with the English Language Proficiency Standards (ELPS). The materials do not include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs. Materials include embedded guidance for teachers to support emergent bilingual students in developing academic vocabulary, increasing comprehension, building background knowledge, and making cross-linguistic connections through oral and written discourse. The materials are not designed for a dual language immersion program but do include resources that outline opportunities to address metalinguistic transfer from English to the partner language.

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 materials are not aligned with the English Language Proficiency Standards (ELPS). The materials do include guidance for teachers in providing linguistic accommodations to students. At the beginning of each unit, a section called "Supporting Math and Academic Vocabulary Development" provides an outline of the available resources and their intended purpose. The "Language Expectations" Section of each lesson contains a set of language expectations that teachers can use to support student learning.
- The *Teacher's Guide* provides suggestions on differentiating instruction for English learners. This guidance utilizes best practices for supporting students in mastering unfamiliar academic vocabulary. It also explains how to use different strategies to meet the language needs of students at varying levels of English proficiency. For example, "Lesson 20, Session 1," "Levels 2–4: Speaking/Reading" advises, "Review the meaning of row and column using gestures.

Have the students practice by playing a short game where the teacher says show me a row and students orient their arms or pencils like a row. Repeat with column."

- The program implementation materials include a variety of resources to engage students in using increasingly complex academic language. For example, the materials provide discourse cards and a discourse cube to facilitate partner dialogue, available in both English and Spanish. Additionally, the materials provide graphic organizers in both English and Spanish and academic vocabulary glossaries in multiple languages.
- The *i-Ready Math* curriculum embeds the WIDA English Language Proficiency Standards throughout its materials. For example, each lesson includes a "Connect to Culture" Section, which activates students' background knowledge as they connect to diverse backgrounds and experiences. Each lesson also offers guidance on differentiated instruction for English learners based on students' individualized language development levels.

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

- The materials are aligned to the WIDA English Language Development standards but are not directly aligned to the English Language Proficiency Standards (ELPS) to use in state-approved bilingual and ESL programs.
- *i-Ready Success Central* provides a "Classroom Mathematics Reference Sheet: Supporting Student Needs," which includes a page on supporting English learners. The reference page provides ideas for differentiated instruction activities for English learners (ELs), guides teachers in the "Connect Mathematics and Language Development" Section, and notes the use of "Bilingual and Multilingual Glossaries" to support speaking, listening, reading, and writing.
- *i-Ready Success Central* includes a "Supports for English Learners" reference sheet that helps teachers locate resources within the materials they can use to implement them effectively in bilingual and ESL programs.
- *Connect Language Development to Mathematics* summarizes the language expectations of each unit for students at varying levels of English proficiency. Additionally, language objectives within each lesson explain what students should be able to say and do linguistically by the end of the lesson.
- The program overview and user guide contain three sections that outline support provided for English learners: "Resources for Language Development," "Language Development and Discourse Support," and "Integrate Language and Mathematics." The materials also contain Spanish-translated versions of all resources in the Teacher Toolkit.

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 "Prepare For" Sections embed guidance for teachers to support emergent bilingual students in academic vocabulary by using graphic organizers. The beginning of some units includes an academic vocabulary routine for teachers to pre-teach vocabulary with students.

For example, the "Unit 1" academic vocabulary routine begins with, " Present the words or phrases. Assess prior knowledge by asking students to rate their knowledge of each term."

- The "Teacher Toolkit" includes multilingual glossaries in Arabic, Chinese, French, Haitian Creole, Portuguese, Russian, Tagalog, Urdu, Vietnamese, and Spanish.
- The materials include guidance for increasing student comprehension using the three-reads strategy and provide opportunities to differentiate various questions using additional reading, writing, listening, and speaking supports for students.
- The materials include guidance for supporting emergent bilingual students in building background knowledge by using the academic vocabulary routines at the beginning of each unit and the graphic organizer in the "Prepare For" Section of each lesson.
- The materials include guidance for supporting emergent bilingual students in making cross-linguistic connections by using the "Cognate Support" routine at the beginning of each unit. For example, the "Unit 1" academic vocabulary routine begins with, " Present the words or phrases. Assess prior knowledge by asking students to rate their knowledge of each term."
- The materials include discourse cards and cubes that provide sentence starters and questions to initiate, deepen, and extend conversations with partners, small groups, or the whole class.
- *i-Ready Success Central* includes a "Supports for English Learners" reference sheet that helps teachers to implement the materials effectively in bilingual and ESL programs. The reference sheets summarize the core components of the materials. One of the core components is *Connect Language Development to Mathematics,* which summarizes the language expectations of each unit for students at varying levels of English proficiency. The language objectives within each lesson explain what students should be able to say and do linguistically by the end of the lesson. *Connect to Community and Cultural Responsiveness* ensures that the material is culturally relevant to all students, and *Connect to Language Development* provides specific scaffolds that teachers can use to support language development within each lesson. "Additional Practice for Vocabulary Development" provides graphic organizers to support language acquisition. "Develop Language" boxes throughout each lesson provide guidance on how to support language development at the phrase, sentence, and discourse level. The "Discuss It" boxes provide guidance on facilitating academic discourse between peers, and "Language Routines" summarizes classroom routines teachers can utilize to support academic language development. These components also include "Discourse Cards" and "Discourse Cubes" to facilitate dialogue during partner discussions, a "Multilingual Glossary of Math Terms" available in ten languages, and an "Academic Vocabulary Glossary" available in both English and Spanish that shows students how to use new vocabulary words within a complete sentence.
- The lesson overview provides a differentiated "Extend" activity for students who demonstrate proficiency in grade-level content and skill. For example, in "Lesson 1," "Solve Problems Involving Scale," "Levels 1–3: Reading/Speaking" instructs teachers, "Using a Co-Constructed Word Bank, read the problem aloud and have students circle unknown words and phrases, like larger, smaller, same exact shape, and original figure. Review selected terms with students."
- The "Lesson Overview" includes a page with an assignment that supports vocabulary development. For example, in "Prepare For Unit 1," "Ratios, Rates, and Circles," students

complete a table of ratios and then compare solutions with a partner. The activity also includes a chart with Spanish cognates for the academic vocabulary in the unit and each lesson. Teachers use the "Cognate Support" routine to support students whose primary language is Spanish.

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 a dual language immersion program but do include resources to support students with language support. Each lesson includes several boxes titled "Differentiation: English Learners." The guidance in these boxes frequently provides opportunities for metalinguistic transfer from English to partner languages by referring to cognates and previously learned vocabulary terms.
- Each lesson includes "Differentiation: Reteach or Reinforce" and "Differentiation: Extend" boxes that support metalinguistic transfer. For example, "Differentiation: English Learners" in "Lesson 7, Session 3" encourages teachers to build upon Spanish cognates such as *metro*, *segundo*, and *modelo*.

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**

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

- The materials include practice opportunities that engage students in the appropriate level of rigor identified in the TEKS. For example, in "Lesson 6," students explain the relationship between circumference, diameter, radius, and area using the lesson vocabulary. Students analyze models to connect strategies for determining the proportional relationship between diameter and circumference. Students interpret and solve word problems about circles using circumference and area formulas by discussing the formula and solving the problem with a partner.
- The materials identify concepts and guide teachers and students to solve real-world, relevant tasks, as well as provide problem-solving situations that align to the TEKS. For example, in "Lesson 15," the materials include hands-on activities with a problem that has real-world connections, such as, "A robot travels 2 feet every 8 seconds. What is the robot's rate in feet per second?"
- Practice opportunities vary in complexity, as illustrated by the depth-of-knowledge levels provided in the materials for "Apply It" problems. For example, the "Lesson 3" quiz includes questions of varying depths of knowledge. While "Problems 1, 2, 3, and 5" are considered depth-of-knowledge level 2, "Question 4" is considered depth-of-knowledge level 1. This variety in rigor ensures that students achieve a depth of understanding of unit rates (TEKS 7.4B) and proportional relationships (TEKS 7.4D).
- The materials include guidance designed to help teachers develop depth of understanding. For example, in "Deepen Understanding" of "Lesson 4, Session 2" teachers ask students to determine the price of peppers needed to make "chiles en nogada" if the original amount is doubled. It then extends student thinking by having them write an equation to represent the cost of the peppers based on the number of pounds required.
- The materials include a variety of assessments that require students to demonstrate a depth of understanding aligned to the TEKS. For example, the "Additional Practice" Sections contain

problems in mathematical and real-world contexts. "Exit Tickets" embedded within each lesson are aligned to the grade-level TEKS, such as in "Lesson 22, Session 1," "Reflect," where students explain why it is important to use a representative sample when they want to learn about a population. Lesson quizzes contain questions of varying complexity that have students solve problems within mathematical and real-world contexts.

- Practice opportunities in the materials engage students in the appropriate grade-level rigor identified in the TEKS. For example, in "Lesson 21, Session 2," the "Model It," "Connect It," and "Apply It" Sections, students solve problems involving percent increases and decreases from real-world situations. The problems are a mixture of numeric responses and short answers, and students have opportunities to engage in collaborative discussions with other students. To support students in understanding the concept, problems utilize hands-on activities to help students visualize percent change.

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

- The materials include a variety of tasks within each lesson that progressively increase in rigor and complexity. For example, in "Lesson 20," where students solve problems involving percentages, the sessions begin by having students explore problems involving percentages to determine a missing amount using tape diagrams and algebraic methods. Students also explore the academic vocabulary they will see in later sessions. In later sessions, students will analyze and calculate simple interest using percentages. At the end of the lesson, students work through sessions to apply the concepts introduced throughout the lesson.
- The materials include various questions that progressively increase in rigor and complexity. For example, in "Lesson 20, Session 2," the practice notes the levels of complexity next to each question within the *Teacher's Guide*, showing the progression of question difficulty from "Basic" to "Medium" and to "Challenge." Students recall basic facts about the problem or perform simple calculations in "Basic" questions. Students solve problems within mathematical and real-world situations that have one or two steps in "Medium" questions. Students solve problems with multiple steps or apply more abstract reasoning skills to determine solutions to "Challenge" questions.
- The questions and tasks included in the materials progressively increase in rigor and complexity. For example, "Lesson 12" develops the concept of division with negative values, a key piece of TEKS 7.3B. During "Session 1," students use real-world scenarios that involve the formula d = rt to model integer division. For example, students model integer division by calculating the rate of descent of a hot air balloon from a given height. In "Session 2," students explore division with rational numbers in similar scenarios. Next, the materials introduce contexts that require division with positive and negative fractions and mixed numbers. By "Session 4," students can generalize the properties of a division problem that would cause it to have a positive or negative quotient.
- The questions and tasks included in the materials lead to grade-level proficiency. For example, "Lesson 13" focuses on TEKS 7.3B, which requires students to use rational number operations to solve problems using addition, subtraction, multiplication, and division with rational numbers. Per TEA's *Supporting Information (Texas Gateway)*, "Students may be expected to perform multiple steps and multiple operations for this SE." "Lesson 13" begins

with relatively simple applications of this standard. For example, the practice problems require students to calculate the mean of a series of numbers. As the lesson progresses, the level of complexity increases. By the conclusion of "Lesson 13," the complexity of the practice problems increases, leading to grade-level proficiency by asking students to solve multi-step problems involving the order of operations with positive and negative rational numbers.

- The materials include scaffolding questions that connect concepts within and across lessons, modules, and units. For example, in grade 7, "Lesson 3," students focus on recognizing and representing proportional relationships. Students use prior knowledge of generating equivalent ratios, rates, and unit rates to identify the constant of proportionality in tables and diagrams. Questioning in real-world problems includes: "How does knowing the unit rate tell you if the quantity of food needed is increasing proportionally?" "How do you write the relationship between the number of grams of catnip and the number of toys?" and "How do you know when two ratios have a proportional relationship?"
- The materials include embedded questions that demonstrate a strategic learning progression so new understanding is built on previous foundations. In "Lesson 7," students use prior knowledge of integers to model addition with positive and negative integers using chips and number lines. In the next lesson, students will use their understanding of adding positive and negative integers to add positive and negative rational numbers. Later on, students will add, subtract, multiply, and divide with positive and negative rational numbers to solve mathematical and real-world problems.

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**

Materials demonstrate coherence across grade bands through a logically sequenced and connected scope and sequence. 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 grade levels and what will be learned in future grade levels to the content to be learned in the current grade level. Materials demonstrate coherence at the lesson level by connecting students' prior knowledge of concepts and procedures from the current and prior grade levels to new mathematical knowledge and skills.

Evidence includes, but is not limited to:

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

- The materials provide a vertical alignment or progression of mathematical concepts from grades K–12. For example, in "Lesson 15," students extend their abilities to generate, identify, and compare equivalent expressions by working with expressions with negative rational coefficients. They use the distributive property to show if two expressions are equivalent. In grade 6, students learned to identify terms, variables, and coefficients in an expression, which helps them identify equivalent expressions by using the distributive property to factor and expand expressions with positive rational coefficients. In grade 7, students will manipulate linear expressions involving rational numbers to write and solve multi-step linear equations and inequalities.
- The "Math Background" document at the beginning of each unit helps teachers unpack the learning progression and make connections between key concepts. The "Math Background" Section summarizes the major themes of the unit and explicitly explains how the themes are connected to prior and future grades. For example, in "Unit 1," students will build on a prior understanding of ratio and unit rate. The first unit theme states, "You can use what you know about unit rates and dividing fractions to explore ratios that compare fractions. Knowing about ratios will help you explore proportional relationships."

- The "Lesson Progression" at the beginning of each unit summarizes the progression of concepts and skills addressed in the unit. It illustrates how they are connected to topics studied in prior and future grade levels. For example, the "Unit 2" "Lesson Progression" shows how ideas across grade bands build upon each other: grade 6, "Lesson 23" builds up to grade 6, "Lesson 25," which then builds up to grade 7, "Lessons 7, 9, and 10."
- The materials include a table of contents at the beginning of each volume that outlines the order and sequence of each unit as it relates to the course and outlines each theme addressed in the unit. Additionally, at the start of each unit, a "Lesson Progression" shows where that lesson falls within the scope of the course and grade bands from grade 3 through Algebra 1. Each lesson breaks this down further by summarizing what students have learned before that lesson, what students will learn in that lesson, and how students will apply the concepts learned in future lessons.

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

- At the beginning of each unit, a video outlines the unit flow and progression and connects the patterns learned in that unit to patterns learned in previous and future units. For example, the "Unit 4" video outlines how students will use patterns discovered in grade 6 related to general properties of equivalence to make connections and develop an understanding of working with expressions, equations, and inequalities.
- The materials include a "Math Background" Section at the beginning of each unit that shows how various big ideas are connected across units. The "Math Background" Section summarizes the major themes of the unit and explicitly explains how they are connected to prior and future grades. For example, "Unit 6" shows how the big idea of surface area and volume and angle relationships will impact student learning as they progress to solving problems about transformations and more complex angle relationships in later units and courses. An additional example is in grade 7, "Unit 1," where students study scale and scale drawings which utilize the ratio reasoning students developed in grade 6. This background knowledge serves as a bridge to subsequent work with proportional relationships in this unit, and lays the foundation for students' understanding of dilations and similarity in grade 8.
- The "Lesson Progression" at the beginning of each unit summarizes the progression of concepts and skills addressed in the unit. It illustrates how they are connected to topics of study from prior and future grade levels. The "Learning Progression" explicitly outlines connections between the big ideas of the current unit and past and future units. For example, the "Learning Progression" in "Lesson 1" explains how identifying equivalent ratios and representing them with double number lines and tables in grade 6 prepared students to compare scale drawings in the current lesson. It further explains that in future lessons, students will extend this knowledge by calculating unit rates for ratios of fractions.
- The "Teacher Toolbox" includes an "Understanding Content Across Grades" document. This chart provides insight into the progression of previous, current, and future lessons to help students make connections and understand mathematical relationships more deeply. For example, in "Unit 1," students build upon grade 5 lessons "Understanding Multiplication as Scaling," "Understanding Ratio Concepts," and "Finding Equivalent Ratios" as they learn how to solve problems involving scale. Students are preparing for grade 7 lessons, "Finding Unit

Rates Involving Ratios of Fractions" and "Represent Proportional Relationships."

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 units continue to reinforce and build upon content that is vertically aligned and learned previously, reinforcing vocabulary and academic language to that strand. For example, the "Unit Overview" for "Unit 1" includes new vocabulary, review vocabulary, and the academic vocabulary needed for each lesson. "Lesson 1" includes new vocabulary such as *scale*, *scale drawing*, and *scale factor*. The vocabulary for review is *area*, *dimension*, and *unit rate*. Academic vocabulary includes *actual* and *justify*. The lessons that reinforce the vocabulary and academic language align to the next lesson, where students find the unit rate associated with a ratio when one or both quantities in the ratio are fractions.
- The materials include conceptual, pictorial, and abstract representations supporting the content and language applicable to previous and future content. For example, the "Unit Flow and Progression" video for "Unit 1," "Proportional Relationships," explains that students build on prior understanding of ratios and rates as they explore proportional relationships. In grade 6, students worked with ratios that compare whole number quantities and found the associated unit rates and rates. In grade 7, students work with ratios that compare fractional quantities and use double-number lines to find the associated rates and unit rates.
- The materials include a component titled "Connect to Prior Knowledge," which guides teachers in recognizing connections between the academic language that students used in previous courses and the language that students will need for the current unit of study. For example, the "Connect to Prior Knowledge" Section for "Lesson 3, Session 1" activates prior knowledge about proportional relationships by asking students to explain how these ratios are similar and different: "18 to 3," "6 for every 1," "12 meals per week are delivered by 2 students," and "a total of 24 hours every 4 days."
- The "Learning Progression" coherently connects current units, past units, and future units. For example, the "Lesson Progression" for "Lesson 1" explains how identifying equivalent ratios and representing them with double number lines and tables in grade 6 prepared students to compare scale drawings in the current lesson. It also explains that students will extend this knowledge by calculating unit rates for ratios of fractions in future lessons.
- The materials demonstrate coherence across units by connecting content learned in previous and future courses to the content learned in the current course. At the beginning of each unit, the *Teacher's Guide* provides a lesson progression chart that outlines where each lesson in that unit falls within the course progression. For example, the "Lesson Progression" for "Unit 6" on geometry shows the previous course lessons, both current and previous grade levels that the lessons in this unit are building upon, and the future lessons for which students are preparing.
- The materials demonstrate coherence across units by connecting language learned across courses through the "Prepare For" Sections at the beginning of each lesson. In these sections, students use familiar vocabulary to review important prerequisite knowledge. The materials also include an academic vocabulary routine and cognate support routine to guide teachers in

helping students make connections between language learned in previous courses and grades. For example, students begin the "Unit 1" academic vocabulary and cognate routines by accessing prior knowledge and making connections with the vocabulary they already know that looks similar to the new academic vocabulary.

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 include guidance for teachers on how to scaffold students' prior knowledge of procedures from the current and previous grade levels to concepts learned throughout the unit. For example, each unit suggests prerequisite lessons that can be incorporated throughout the unit, along with pacing adjustment recommendations found in the *i-Ready* "Teacher Toolkit." Each lesson begins with an "Explore" Section, where students apply skills from the current and previous grade levels to the content learned in the current unit. For example, in the "Lesson 29, Session 1," "Explore" Section, students use procedures they previously learned about identifying different types of triangles and quadrilaterals and applying them to the new skill of identifying properties of congruent shapes. Additionally, each lesson includes a "Connect to Prior Knowledge" Section where students apply procedures from earlier in the course or at a previous grade level. For example, in "Lesson 29, Session 1," students compare four different triangles and use the procedures for identifying what is the same or different about each one, which the student learned earlier in the course and will apply again in this lesson.
- The materials include guidance for teachers on how to scaffold students' prior knowledge of concepts from the current and previous grade levels to the skills learned throughout the current unit and lesson. Each unit has a lesson progression that shows the teacher what concepts students have previously learned before that lesson from both the previous grade level and previous lessons within the current course. Additionally, at the beginning of each lesson, a "Learning Progression" shows what students have learned before this lesson and what future lessons the current lesson will impact. For example, the "Learning Progression" for "Unit 6, Lesson 25" shows what students have learned in grade 6 and earlier in the course that will support them in this lesson. It also shows how this lesson will impact the next lesson. The materials also include a "Prior Knowledge" Section at the beginning of each lesson that provides bulleted information to the teacher about concepts and skills that students should already be familiar with. For example, the "Unit 6, Lesson 25" "Prior Knowledge" Section states that before starting this lesson, students should have an understanding of finding areas of triangles and quadrilaterals and know how to apply strategies for finding areas of composite figures.
- The materials intentionally connect students' prior knowledge from previous lessons to new mathematical knowledge and skills addressed in the current lesson. For example, "Lesson 8, Session 3" includes a "Deepen Understanding" extension, in which students are challenged to use their knowledge of the properties of operations from previous lessons to identify efficient strategies for adding and subtracting positive and negative rational numbers.
- "Understanding Content Across Grades" in the "Teacher Toolbox" displays a chart that provides insight into the progression of previous, current, and future lessons. This insight

helps students make connections from previous lessons to understand current mathematical ideas more deeply and prepares them for future lessons. For example, in "Unit 6," students build upon grade 6 lessons on finding the area of a parallelogram, finding the area of triangles and other polygons, and using nets to find the surface area. In "Lesson 25," students write and solve equations to solve problems involving area, surface area, volume, and angle relationships. The progression of the lessons in this strand prepares students for grade 8, "Lesson 26" about understanding the Pythagorean Theorem.

- The "Teacher Toolbox" provides a student activity that uses prior knowledge of ratio concepts and equivalent ratios as students build on academic knowledge. For example, in "Unit 1," students are given various sequences of the letters G and H. Students match the ratio of the number of Gs to the number of Hs for each of the given ratios.

Depth and Coherence of Key Concepts

4.3	Spaced and Interleaved Practice	8/8
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.	**4/4**

Materials provide spaced retrieval opportunities with previously learned skills and concepts across lessons and units. Materials provide interleaved practice opportunities with previously learned skills and concepts across 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 provide spaced retrieval opportunities with previously learned skills across units and lessons. For example, in "Lesson 20, Session 2," the "Teacher Toolkit" includes fluency and skills practice for finding simple interest, which was previously learned in that lesson. The "Teacher Toolkit" includes a variety of interactive games for students to practice skills. For example, in "Unit 1, Lesson 3," students can use digital activities to practice the previously learned skills of using unit rates, ratios, and scale factors, which they can then apply to proportional relationships, a topic taught in "Lesson 3."
- The materials provide spaced retrieval opportunities with previously learned concepts within the units and lessons. For example, in "Lesson 20, Session 1," students use the previously learned concept of finding the percent of a number to solve problems that involve finding the part given the whole and the percent, allowing students to engage in practice with the previously learned concept. Additionally, in "Lesson 20, Session 3," students apply previously learned concepts from "Session 1" about using tape diagrams to determine the part given the percent and the whole. At the end of both the *Teacher's Guide* and the *Student Worktext*, cumulative practices are broken up into sets tied to specific lessons within the materials, allowing students to engage in spaced retrieval opportunities at the teacher's discretion. For example, in "Unit 6, Set 1," the cumulative practice on solving problems with percentages allows students to practice with concepts previously learned in "Lesson 20."
- The *i-Ready* online learning platform includes a variety of tools that facilitate spaced retrieval. "Learning Games" help students master prerequisite skills, "Interactive Practice" provides students with additional digital practice opportunities, and "Cumulative Practice" allows teachers to assign content from previous units.
- The materials include opportunities for spaced retrieval throughout each unit. For example, "Lesson 8, Session 3" includes a "Deepen Understanding" extension, in which students are challenged to use their prior knowledge of the properties of operations from previous lessons to identify efficient strategies for adding and subtracting positive and negative rational numbers.

- The materials provide spaced retrieval opportunities with previously learned skills across lessons. For example, in "Unit 1," students build on a prior understanding of ratios and rates as they explore proportional relationships. In grade 6, students worked with ratios that compare whole number quantities and found the associated unit rates and rates. In grade 7, students work with ratios that compare fractional quantities and use double-number lines to find the associated rates and unit rates. These concepts are incorporated in the "Prepare," "Reteach," "Reinforce," and "Extend" Sections throughout the unit. The unit also provides interactive tutorials for equivalent ratios, equivalent ratio tables, and unit rates for ratios with fractions.
- The materials include routines that require students to use previously learned skills throughout the lessons. For example, in "Lesson 7," the "Start" activity uses prior knowledge to prepare students to represent positive and negative addends on a number line. In the "Model It" Section, students use what they know about opposites to complete problems about adding opposites with integer chips. Students have extra practice through the "Prepare for Addition with Negative Integers" activity, where students complete a graphic organizer about what they know about negative numbers.

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

- The materials provide interleaved practice opportunities for students to engage with previously learned concepts across lessons and units with the "Math in Action" lessons at the end of each unit. These lessons allow students to review and apply unit content while learning how to develop complete responses to performance tasks. For example, "Unit 6" has two different "Math in Action" lessons where students apply the concepts of area, surface area, volume, and angle relationships to solve real-world scenarios of designing an overpass and determining bridge angles.
- The materials provide interleaved practice opportunities for students to engage with previously learned skills across units and lessons. Each lesson contains a practice section where students determine which session strategy to apply to solve each question. For example, in the "Lesson 25, Session 2," "Practice" Section, students determine which strategies and formulas to use to solve various problems involving composite figures. The "Unit Review" at the end of each unit allows students to engage in interleaved practice on skills learned throughout the unit. The *Texas Ready* materials of the *i-Ready* "Teacher Toolkit" provide interleaved TEKS practice in the *Ready Instruction* book for the skills learned in that lesson. For example, in the "Lesson 8" TEKS practice, students decide which strategy they should use to determine the solution to problems involving proportional relationships.
- The materials embed previously learned skills and concepts within each lesson. For example, "Lesson 1" reinforces students' prior knowledge of double number lines and proportional relationships to introduce the concept of scale drawings. In this way, students practice representing ratios using models such as double number lines as they study similarity and scale drawings.
- Each unit includes interleaved practice opportunities linking current content to previously learned skills and concepts. For example, "Lesson 6, Session 2" requires students to apply

their prior knowledge of graphs of proportional relationships to represent the relationship between the diameter of a circle, x, and its circumference, y.

- The materials provide interleaved practice opportunities for students to engage with previously learned skills across units and lessons. For example, in "Lesson 1, Session 1," students use what they know about ratios and rates to solve the problem in the "Try It" Section. The problem states, "To make a model of a geodesic dome, Ayana needs a smaller triangle that is the same shape as Triangle A. Which of these triangles could she use?" Students can solve using double number lines, grid paper, ribbon, or yarn. These same strategies can be used in the "Additional Practice" Section of the lesson.
- Materials provide interleaved practice opportunities with previously learned skills across units. The "Unit Review" at the end of each unit provides additional practice for students to use what they have learned, including various math tools to complete the problems. For example, in the "Unit Review" for "Unit 1," students solve a problem using complex fractions to determine the unit rate. Students also use a table to answer a multiple-choice question on the constant of proportionality. Students analyze a proportional graph and then decide if each statement is true or false. Students use a table to determine the unit rate and then write the constant of proportionality as an equation.

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**

Questions and tasks require students to interpret, analyze, and evaluate a variety of models and representations for mathematical concepts and situations. Questions and tasks require students to create a variety of models to represent mathematical situations. Questions and tasks 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 include questions and tasks where students interpret and analyze models and representations for mathematical concepts and situations. For example, in the "Unit 1, Lesson 3" quiz, students are asked to analyze and interpret the meaning of a double number line as it relates to proportional reasoning.
- The materials include questions and tasks that prompt students to evaluate a variety of models for mathematical concepts and situations. For example, in the "Unit 1, Lesson 1" "Apply It" problem, students evaluate and justify models using scale drawings to help develop a deeper understanding of scale factors.
- The materials provide questions and tasks that prompt students to engage with a variety of models and representations to interpret, analyze, and evaluate concepts. For example, in "Lesson 1, Session 1," "Explore Scale Drawings," the "Try It" problem shows an isosceles triangle with side lengths given. The problem asks, "Ayana needs a smaller triangle that is the same shape as triangle A. Which of these triangles could she use? Show how you know." Students use prior knowledge of ratios and can choose tools such as double number lines, grid paper, ribbon, or yard to model and solve the problem.
- The first lessons that cover a concept start with models to build conceptual understanding. For example, in "Lesson 2, Session 2," "Develop Solving Problems with Unit Rates for Ratios with Two Fractions," students develop strategies such as double number lines and fraction bars for comparing unit rates calculated from fractions. Students recognize that ratios with fractions can be simplified by solving division problems.
- The materials include questions and prompts for students to engage with a variety of models and representations to interpret, analyze, and evaluate various concepts with real-world

applications. For example, "Lesson 3, Quiz 3" includes questions that utilize tables and double number lines for students to interpret, analyze, and evaluate to answer the questions.

- The materials include questions that require students to consider multiple ways of representing mathematical concepts. For example, in "Lesson 6, Session 2," students interpret multiple models for circumference when exploring the relationship between diameter and circumference. The first model shows a series of circles with increasing diameters and their approximate circumferences. The second model shows these values plotted on a graph, where x represents the diameter and y represents the circumference. The "Deepen Understanding" Section explains how students could use the graph to estimate the circumference of a circle given a specific diameter; it then extends student thinking by asking how the graph would be different if the x-axis represented the radius instead of the diameter. In this way, students interpret and analyze multiple models and representations as they develop a deep understanding of circumference.
- The materials include questions that require students to consider multiple ways of representing mathematical concepts. For example, "Lesson 6" and "Lesson 3" use multiple models to help students understand the formula for the area of a circle. First, the "Develop" Section asks students to determine the area of a circle by estimating the number of squares it covers on a 10x10 grid. Next, students are challenged to make a connection between the area formula and a diagram showing sections of a circle rearranged to form an approximation of a parallelogram. Third, students are asked to visualize "unrolling a circle" into a triangle. The first model shows a series of circles with increasing diameters and their approximate circumferences. In this way, students interpret and analyze multiple models and representations as they develop a deep understanding of the area formula for circles.
- Each lesson contains a family letter suggesting how students can apply what they are learning with their families at home. The tasks outlined in the family letter require students to interpret various models and representations of mathematical concepts and situations. For example, the "Lesson 2" family letter has students interpret the use of double number lines to find unit rates for ratios. Students help their families interpret the properties by asking questions like, "Where else do you see ratios with fractions in the world around you?"
- Within the "Prepare For" Sections of the materials, students analyze models and representations to develop a deeper understanding of academic vocabulary. For example, in "Lesson 5, Session 1," students use tabular representations to analyze the concept of constant of proportionality.
- The materials include tasks and questions where students analyze mathematical concepts and situations using models. For example, the "Reinforce" Section of the *i-Ready* "Teacher Toolkit" includes differentiation tasks for teachers to use in math centers. In "Lesson 9," the math center tasks include questions where students use number lines to analyze the concept of subtracting integers.
- Throughout each lesson, students encounter a variety of questions and tasks that require them to evaluate models and visual representations of mathematical concepts and real-world situations. For example, in "Lesson 7, Session 2," students use visual representations, like number lines, and concrete models, like integer chips, to evaluate addition with negative integers.

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

- The materials provide questions that require students to create a variety of models to represent mathematical situations. For example, "Unit 2, Lesson 7," includes a "Math Journal," which prompts students to create integer chips and number lines with vectors to represent their understanding of addition with negative integers.
- The lessons include tasks that require students to create models to represent mathematical concepts. For example, in "Lesson 7, Session 1," students use both number lines and integer chips to model integer addition.
- The lessons include tasks that require students to create models to represent mathematical concepts. For example, the "Hands-On Activity" for "Lesson 6, Session 3" guides students through the process of creating an area model for a circle by cutting a circle into 8 sectors and rearranging them to approximate a parallelogram. In this way, students create a physical model to approximate the formula for the area of a circle.
- The materials provide tasks that allow students to apply their knowledge to mathematical problems. For example, in the "Unit 1, Lesson 1" "Apply It" problem, students are asked to create models of scale drawings to represent the overall effects of scale factors on similar figures.

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

- The materials include questions that prompt students to apply their conceptual understanding of concepts to new problems. For example, the "Unit 1, Lesson 3" "Visual Model" asks students to apply what they know about proportional relationships using two-color counters.
- The materials include tasks that allow students to apply their knowledge to real-world problem situations. For example, the "Lesson 8, Session 2" "Try It" problem asks students to use their knowledge of integer operations to determine the freezing point for water on streets that have not been treated before a snowstorm.
- The materials provide questions and tasks that prompt students to apply knowledge to new situations. For example, the "Model It" and "Discuss It" questions in "Lesson 3, Session 1" prompt students to apply conceptual understanding of proportional relationships to new visual models such as double number lines and fraction tiles. In the "Differentiation" task, students utilize 2-color counters to show tangible unit rate proportional relationships.
- The materials include tasks that allow students to apply their knowledge to real-world problem situations. For example, the "Lesson 8, Session 2" "Additional Practice" Section asks students to use their knowledge of integer operations to identify two different expressions that are equivalent to -8 + 17.

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**

Materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level tasks. Materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures within the lesson and/or throughout a unit. Materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the lesson and throughout a unit. Materials contain embedded supports 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 provide students with tasks designed to build math fluency and automaticity. The *i-Ready* "Teacher Toolkit" provides math fluency games for each unit that teachers can assign to students to build fluency on the grade level and prerequisite skills.
- Throughout each lesson, teachers can assign students suggested fluency and skills practice to help them develop fluency and automaticity of the concepts being learned in that lesson. For example, "Unit 1, Lesson 1" provides students with two different fluency and skills practices: one for using scale factors to find areas and one for redrawing a scale drawing.
- Each unit has an online platform, "Math Tools," where students engage in math games that can be used to build student automaticity and fluency necessary to complete grade-level tasks.
- Student-led activities within the materials involve hands-on experiences with mathematical ideas that reinforce fluency on three differentiated levels (on, below, and above).

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 "Lesson Overview" at the beginning of each lesson includes activities that require manipulatives for hands-on exploration of mathematical concepts to develop procedural skills and fluency through practical application.

- The "Try–Discuss–Connect" routine supports students in developing efficiency and flexibility with mathematical procedures by having them draw comparisons between different approaches. Students determine strategies that are most efficient. For example, in the "Unit 1, Lesson 3" "Discuss It" Section, the materials prompt students to respond with how they would represent a real-world problem using different models and have them justify their choice.
- The materials provide opportunities for students to practice utilizing procedures efficiently. For example, in the "Unit 4" "Performance Task," students use inequalities to model minimum perimeter and maximum price. Teachers guide students to practice the application of flexible and accurate modeling to show that algebra is more efficient than guess-and-check.
- The materials encourage students to use flexibility in applying procedures. For example, in "Lesson 19, Session 5," "Problem 5" asks students to analyze the work of two different fictional students, Marta and Kareem, who correctly utilized different strategies when solving a multi-step equation. "Problem 5" requires students to explain why the strategies used by Marta and Kareem are both correct, even though they are different.

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

- The materials encourage students to evaluate their procedures and strategies for efficiency and flexibility. For example, the "Facilitate Whole Class Discussion" of "Lesson 15, Session 3" directs teachers to "Look for the idea that all of these strategies are useful and can lead to equivalent expressions but that specific strategies are more efficient or reasonable to use in specific situations."
- The materials encourage students to evaluate their procedures and strategies for efficiency and flexibility. For example, the guidance found with the "Exit Ticket" for "Lesson 14, Session 2" warns, "If students do not account for place value correctly, such as by calculating the difference -77.8-11 as -78.9, then ask them how they could use estimation to make sure that their exact answer is reasonable and what to do if the estimate and exact answer do not agree."
- Each unit includes a "Self Check" at the beginning of the unit and a "Self Reflection" at the end of the unit, where students respond to prompts to help them develop a growth mindset and take charge of their learning.

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

- The materials include guidance that teachers can use to help students develop efficiency in their mathematical strategies. For example, the "Facilitate Whole Class Discussion" Section of "Lesson 1, Session 2" recommends that teachers "Look for the idea that multiplying by a scale factor is an efficient way to find actual distances" by asking questions such as "When you have a scale drawing, why is the scale factor a useful value to find?" These whole-class discussions are designed to help students see how they can efficiently apply their new conceptual understanding to a variety of contexts.

- The materials support teachers in guiding students toward efficiency. For example, the "Unit 4 Review" encourages teachers to "Look for explanations that show an understanding that modeling with algebra is more efficient than using guess-and-check."
- The materials support teachers in guiding students to develop efficient approaches to finding solutions for the concepts being learned. Throughout the "Try–Discuss–Connect" instructional framework, the materials provide prompts and guidance to teachers to have students evaluate different strategies for solving problems to determine the most efficient approaches. For example, in "Lesson 1, Session 1," the "Facilitate Whole Class Discussion" activity asks teachers to call on students to share their selected strategies and have them compare how the strategies shared are similar and different.

Balance of Conceptual and Procedural Understanding

5.3	Balance of Conceptual Understanding and Procedural Fluency	16/16
5.3a	Materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed.	**2/2**
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**

Materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed. Questions and tasks include the use of concrete models and manipulatives, pictorial representation (figures/drawings), and abstract representations. Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts.

Evidence includes, but is not limited to:

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

- The "Teacher Toolkit" includes a resource called "Answering the Demands of the TEKS with Ready Texas Mathematics," which explicitly states how the materials address both the conceptual and procedural emphasis of the TEKS.
- The materials include "Yearly Pacing Guidance for Ready Texas Math" with a scope and sequence that explicitly maps out how each lesson, activity, or resource aligns to specific TEKS.
- The *Teacher Guide* explains how the materials should be used to develop conceptual understanding and build procedural fluency. For example, the front matter includes a "Supporting Research" component that explicitly addresses both conceptual and procedural learning. "Supporting Research" states, "Conceptual understanding is meaningful knowledge of mathematical concepts and relationships and understanding of why math processes and rules work." It then provides specific examples of how the materials support conceptual understanding. Similarly, "Supporting Research" explains, "Procedural fluency and skills are the ways students use their knowledge to accurately, flexibly, and efficiently apply mathematical procedures and options." It then outlines two specific examples of support for procedural fluency from the materials.

Questions and tasks include the use of concrete models and manipulatives, pictorial representation (figures/drawings), and abstract representations.

- The materials provide teachers with guidance on including concrete models, representational models, and abstract representations for each concept. The "Math Background" Section of

each unit incorporates detailed drawings, visual representations, symbolic notations, numeric expressions, and algorithms to illustrate concepts like proportional relationships.

- The materials include both concrete models and pictorial representations. For example, "Lesson 7, Session 1" represents integer addition physically with integer chips and pictorially with number lines.
- The materials include abstract representations that are appropriate for the grade level. For example, "Lesson 7, Session 1" begins with concrete and pictorial representations of integer addition and then progresses to abstract representation with numeric expressions.

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

- The materials support students in connecting pictorial models to abstract concepts. For example, "Lesson 7, Session 1" helps students build a conceptual foundation for integer addition by explicitly explaining the connections between integer chips, number lines, and algebraic expressions.
- The materials support students in connecting concrete models to abstract concepts. For example, "Lesson 18, Session 2" uses algebra tiles to illustrate the process of solving two-step equations. It then demonstrates how to use the same inverse operations to solve two-step equations algebraically.
- The instructional framework routine provides opportunities for students to articulate their emerging understanding of mathematical concepts and procedures through modeling, discussion, and practice.

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**

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 addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context. Materials include embedded guidance for the teacher to support the application of appropriate mathematical language including 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.

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.

- The materials include a "Connect to Prior Knowledge" component which guides teachers in recognizing connections between the academic language students used in previous courses and the language students will need for the current unit of study. For example, the "Connect to Prior Knowledge" component for "Lesson 3, Session 1" activates prior knowledge about proportional relationships by asking students to explain how the ratios "18 to 3," "6 for every 1," "12 meals per week are delivered by 2 students," and "a total of 24 hours every 4 days" are similar and different.
- The materials use manipulatives to develop academic language. For example, "Lesson 18, Session 2" uses algebra tiles to model the process of solving two-step equations with inverse operations. As students work with the tiles, the materials encourage teachers to ask questions to help them develop formal academic vocabulary, such as," Do you recommend a first step of addition, subtraction, multiplication, or division? Explain why," and "What is the next step?"
- The materials provide students with opportunities to develop their academic language using visuals and manipulatives within the "Differentiation" boxes placed throughout each lesson.

For example, in "Lesson 1, Session 3," students are asked to analyze and discuss scale models using base ten blocks and correct academic vocabulary.

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

- The materials include guidance that supports teachers in developing academic mathematical vocabulary. For example, the "Discuss It" Section of "Lesson 12, Session 2" asks students, "How do you know your answer is reasonable?" It then directs them to respond to their partner using the stem, "My answer is reasonable because..."
- The materials include dialogue structures that help students verbally practice utilizing new vocabulary. For example, the "Discuss It" Section of "Lesson 12, Session 2" asks students, "How do you know your answer is reasonable?" It then directs them to respond to their partner using the stem, "My answer is reasonable because..." The *Teacher Guide* provides additional guidance for teachers, such as, "To support students in extending the conversation, prompt them to discuss these questions: How did you determine the unit of measurement for the answer? How will the temperature change from the ending elevation to the starting elevation?"
- The materials include guidance to teachers for providing scaffolded support in developing and using academic vocabulary in the "Build Academic Vocabulary" Section at the beginning of each unit. For example, in "Unit 4," teachers are given scaffolds such as the "Collect and Display" routine, where teachers display vocabulary on a chart that students can refer to during discussions and writing, which helps students move from informal language to formal academic language.

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.

- The materials include "Language Expectations" for each unit, outlining unit-specific language objectives. These expectations are differentiated by language proficiency level: beginning, intermediate, and advanced/advanced high. This resource also includes guidance regarding academic vocabulary routines, such as accessing prior knowledge, pronouncing the words, defining the words, and using the words.
- The materials include exemplar student responses to tasks. For example, the *Teacher Guide* for the "Lesson 12, Session 2" "Try It" problem provides two samples of ideal student responses.
- Lessons include embedded teacher guidance in the "Monitor & Guide" Section, which helps prepare them for facilitating strong student discourse grounded in quality tasks and concepts that use appropriate academic vocabulary.

Balance of Conceptual and Procedural Understanding

5.5	Process Standards Connections	4/6
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.	**1/2**
5.5c	Materials include a description for each unit of how process standards are incorporated and connected throughout the unit.	**1/2**
5.5d	Materials include an overview of the process standards incorporated into each lesson.	**1/1**

Process standards are integrated appropriately into the materials. Materials include a description of how process standards are incorporated. Materials do not include a description of how process standards are connected throughout the course. Materials include a description for each unit of how process standards are incorporated throughout the unit. Materials do not include a description for each unit of how process standards are 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 correlation chart document that shows TEKS coverage in the materials, including process standards. The “Ready Texas Mathematics Instruction” column demonstrates that the process standards are incorporated into all lessons.
- The Ready Texas materials include a “Mathematical Process Standards in the TEKS” document to demonstrate how the process standards are integrated into the materials, including the “Mathematical Process Standards (MPS) Tips” callouts in the materials that highlight “. . . special opportunities to reinforce the habits of mind that the Process Standards represent.”
- Each lesson provides a note at the bottom of the lesson introduction which highlights the specific process standards that are the focus of the lesson, though in many cases other process standards can also be connected.
- The materials encourage mathematical communication. For example, the "Differentiation: English Learners" box for "Lesson 12, Session 3" advises teachers to use a co-constructed word bank to have students brainstorm words they can use to describe a change in average temperature. It then provides recommended sentence frames to facilitate both verbal and written mathematical communication.
- The materials describe how students are expected to utilize problem-solving techniques and communicate about mathematics. For example, the "Problem Notes" for "Lesson 18, Session 3" explain how students can use key information from the problem to write algebraic expressions. The "Problem Notes" then explain how students can use these expressions to answer the essential questions asked by the problem.

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

- The "Teacher Toolkit" includes "Answering the Demands of the TEKS with Ready Texas Mathematics," a resource that describes how the academic and process standards are incorporated throughout the course and how the process standards support student learning of the content standards. This does not describe how the process standards are connected throughout the course.
- The materials incorporate essential ideas from the process standards throughout the course. For example, the "Unit 3, Session 1" "Math in Action" Section explains how students should make sense of a problem. For example, "Make Sense of the Problem: Presenting the Counting Heartbeats problem and use Three Reads to help students make sense of it. For each read, have a different volunteer read aloud each section of the information. After the first read, be sure students recognize that the target number of heartbeats varies with age and intensity of exercise." There is no evidence of how this process standard is connected to others throughout the course.
- The materials incorporate essential ideas from the process standards throughout the course in the "Try-Discuss-Connect" framework. For example, in "Lesson 18, Session 3," students try a problem using algebra tiles to make sense of a situation, discuss strategies with a partner, and make connections to previous learning in the course.

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

- The "Teacher Toolkit" includes "Answering the Demands of the TEKS with Ready Texas Mathematics," a resource that describes how the academic and process standards are incorporated in the unit. It discusses how the process standards support student learning of the content standards. There is no evidence of how the process standards connect throughout the unit.
- Each "Lesson Overview" lists which standards are embedded in each series of lessons within a unit. Listed MPSs make connections to student engagement protocols throughout the lesson's instructional framework routine. There is no description of how process skills connect throughout the unit.

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

- Each "Ready Texas" lesson in the *i-Ready* materials lists the process standards incorporated into the lesson. Next to the process standards, a note directs teachers to refer to the supplemental materials included in the "Ready Texas" Section of the "Teacher Toolkit" for further guidance on using the mathematical process standards in the lesson.
- The materials include a TEKS integration document that indicates the process standards identification numbers, the component that covers it, the page number, and the lesson reference.

- Each lesson provides a note at the bottom of the lesson introduction which highlights the specific process standards that are the focus of the lesson, though in many cases other process standards can also be connected.

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**

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 materials provide students with multiple opportunities to think mathematically. In the "Prepare For" Section of each lesson, students use mathematical models, symbols, and academic language to develop an understanding of new concepts and vocabulary. As students move through the lesson's other components, they encounter real-world problems and models that require them to think mathematically to solve them. For example, in "Lesson 10, Session 1," students are asked to think about how the models show whether they should find the sum or difference of 10 and -5.
- The materials provide teachers with guidance on supporting students in making sense of mathematics. The "Math Background" Section located at the beginning of each unit provides teachers with insights into what students need to understand conceptually and abstractly. It also provides teachers with models and examples for each concept taught in that unit. Throughout each lesson, teachers are given guidance and prompts on how to respond and approach students based on their current level of understanding. For example, the materials will provide teachers with a question to ask students as well as responses to listen for from students. Students are also provided the opportunity to refine, reinforce, or extend their mathematical thinking throughout each lesson with the differentiation boxes embedded throughout. Here, students use a variety of models and visual representations to deepen their conceptual understanding and make sense of the mathematical concepts being taught in each lesson.
- The "Try It" routine of the instructional framework includes opportunities for students to practice productive struggle, requiring them to demonstrate depth of understanding by thinking, persevering through problem-solving, and making sense of mathematical concepts by applying the "Three Reads" protocol.

- The materials include a component titled "Persevere on Your Own," which guides students through independently completing a rigorous, open-ended, real-world mathematical task. For example, the "Persevere on Your Own" activity for "Unit 6" asks students to use their knowledge of composite areas to help an environmental engineer design a park. The materials support students in completing this task by providing a problem-solving checklist. The *Teacher Guide* also provides helpful facilitation recommendations for teachers, such as the suggestion to utilize the "Three Reads" protocol.
- The *Teacher Guide* includes suggestions to help students make sense of mathematics within each unit. For example, the "Persevere On Your Own" activity for "Unit 6" includes the following note for teachers: "Make Sense of the Problem: Present the Planning a Park problem and use Three Reads to help students make sense of it. Have different volunteers take turns reading aloud each section of information. Students should recognize that this problem asks them to make scale drawings of the plans based on the scale provided on the map."
- The "Math in Action" lessons at the end of the unit provide opportunities for students to make sense of problems and persevere in solving them. For example, in "Unit 7," the "Math in Action" Section of "Session 1" asks students to examine a problem that involves the theoretical probability of compound events. They analyze a student's solution to identify what makes it a good solution and then demonstrate that the problem has more than one approach and more than one solution. In the "Session 2" "Persevere On Your Own" activity, students take what they have learned to solve a separate problem. As students work through their solutions, they keep track of their tasks using a "Problem-Solving Checklist."
- The materials identify common misconceptions students may have and pre-plan teacher moves for students to make sense of mathematics. For example, in "Lesson 30, Session 1," a common misconception student have is confusing the terms *outcome* and *event*. Teachers can provide a spinner divided into eight equal-size sections labeled A to H and have students list all the possible outcomes. Then students list events such as spinning a vowel or consonant. Students discuss how the lists are the same and different.

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

- Materials support students in justifying that there can be multiple ways to solve problems. For example, in the "Unit 2, Session 1" "Math in Action" activity, teachers implement the "Three Reads" strategy to help students make sense of the first problem of planning a route to collect samples. After the first read, students recognize that there are seven possible pools to collect samples but will only go to four pools. After the second read, students explain that they need to choose four pools, decide on an order to visit pools, and then find the change in elevation between pairs of pools on the route. After the third read, students identify important quantities and relationships in the problem, including quantities that involve student choice as there can be multiple correct solutions to the problem. Students share their ideas about how they might use concepts from the unit to approach and solve this problem.
- Materials support students in understanding that there can be multiple ways to solve problems. For example, in the "Unit 2, Session 1" "Math in Action" activity, students examine a problem that involves adding and subtracting positive and negative numbers. Teachers use the "Three Reads" strategy to help students make sense of the problem and have them

discuss the different ways they might approach the problem. Students then analyze a sample solution and use the "Problem-Solving Checklist" to identify what makes it a good solution. Teachers then have students look for a different way to solve the problem using the "Problem-Solving Checklist."

- The materials include questions that require students to consider multiple ways of representing mathematical concepts. For example, as part of an exploration of the relationship between diameter and circumference in "Lesson 6, Session 2," students interpret multiple models for circumference. The first model shows a series of circles with increasing diameters and their approximate circumferences. The second model shows these values plotted on a graph, where *x* represents the diameter and *y* represents the circumference of the circle. The "Deepen Understanding" Section asks students to explain how they could use the graph to estimate the circumference of a circle given a specific diameter; it then extends student thinking by asking how the graph would be different if the x-axis represented the radius instead of the diameter. In this way, students interpret and analyze multiple models and representations as they develop a deep understanding of circumference.
- The materials support students in explaining that multiple strategies can be used to solve problems. For example, problem 5 of "Lesson 19, Session 5" asks students to analyze the work of two fictional students, Marta and Kareem, who correctly utilized different strategies when solving a multi-step equation. Problem 5 requires students to explain why the strategies used by Marta and Kareem are correct, even though they are different.
- Throughout each lesson, students are given support with the understanding that there are multiple ways to solve problems and complete tasks. Throughout each session, teachers are provided with guidance on how to support students in using different strategies to solve problems. For example, "Lesson 13, Session 3" provides teachers with guidance on having students reflect on what they have learned by focusing on the various strategies used to solve the "Try It" problems and discussing their ideas with a partner. The materials also provide tasks that contain questions that can be solved in various ways and provide teachers with guidance in helping students recognize the different approaches they can take. For example, the "Exit Ticket" for "Lesson 13, Session 3" states that students' solutions should show an understanding of using long division to express a mixed number as a repeating decimal.
- Within the "Facilitate Whole Class Discussions" Sections of the materials, students are provided opportunities to explain the various strategies they used to solve problems and tasks. Once students share their strategies, teachers are provided with prompts to facilitate classroom discussions that help students explain that there are multiple ways to solve the problem or task. For example, in "Lesson 13, Session 3," students are asked to share their strategies for solving the "Try It" problem. The teacher is then prompted to guide students to connect and compare the different representations that students shared and provides further guidance on helping students communicate their ideas by having them repeat or rephrase what other students shared.
- Within the "Model It" Sections of the materials, teachers are provided with guidance to support students in justifying that multiple strategies and models can be used to solve problems. For example, in "Lesson 14, Session 2," "Model It" asks students to connect models they presented with the models presented in the materials and are then asked to justify how rewriting subtraction as addition can help with evaluating an expression.

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

- Within the "Differentiation" portions of the materials, students are provided with opportunities to make sense of the mathematical concepts learned by doing math with their peers using various concrete and representational models. For example, in "Lesson 14, Session 1," students are asked to work with a partner to solve problems with calculating mean using a concrete model of two-color counters. The *i-Ready* "Teacher Toolkit" includes reteach activities for teachers to do with students to help them make sense of the mathematical concepts they are learning. Each reteach opportunity provides prompts and questions for the teacher to ask students as they guide them in making sense of the math.
- The "Prepare For" Sections of the materials provide students with opportunities to make sense of mathematical concepts by writing about math with their peers and teacher. Students use graphic organizers to display information about various concepts and academic vocabulary. For example, in "Lesson 15, Session 1," students develop definitions for *term*, draw an illustration to represent it, and create examples of how they can be represented using a graphic organizer. The "Connect It" Sections of each lesson have students write about connections they make between the current questions and the problem presented on the previous page. The *Teacher Guide* provides teachers with sample student responses to assist teachers with supporting them in their writing.
- The materials provide opportunities throughout for students to make sense of mathematical concepts through structured discussions with teachers and peers. "Discuss It" boxes are embedded throughout each lesson, guiding students in discussing mathematical concepts with their peers. For example, the "Lesson 15, Session 2" "Discuss It" question asks students to discuss how they figured out whether expressions in the problem were equivalent. Additionally, throughout each lesson, teachers have opportunities to facilitate whole class discussions by providing guidance and prompts to engage students in discussions that help them make sense of the mathematical concepts being learned. For example, "Lesson 15, Session 2" provides teachers with guidance on facilitating a discussion to help students make sense of equivalent expressions.
- The materials include "Protocols for Engagement" materials which are designed to require students to make sense of mathematics through doing, writing about, and discussing math with peers and teachers by implementing active engagement protocols such as "Stand and Share," "Give one Get One," and "Vote with Your Feet." These protocols increase student engagement and ownership of learning.
- The materials provide opportunities to talk about math with their peers. For example, the "Differentiation: English Learners" Section of "Lesson 12, Session 3" advises teachers to use a co-constructed word bank to have students brainstorm words that they can use to describe a change in average temperature. It then provides recommended sentence frames to facilitate both verbal and written mathematical communication.
- The materials integrate writing into the learning process to deepen student learning and understanding of mathematical concepts. For example, in "Unit 2" "Lesson 1, Session 5," students respond to question 9 in their "Math Journal" by agreeing or disagreeing with the question and providing an example to support their answer. In addition to the "Math Journal"

entry, students use the "Interactive Glossary" to find the entry for *scale drawing*. Students rewrite the definition in their own words.

- The materials include opportunities for classroom discourse where students discuss their mathematical thinking, share different solution strategies, make connections, and engage in collaborative learning with peers. For example, in "Unit 1" "Lesson 1, Session 1," students use the "Three Reads" strategy to help them make sense of the first "Try It" problem. After each read, the teacher asks a question and students turn and talk to discuss their answers before discussing as a class. After students work on the "Try It" problem, students respond to "Discuss It" questions with partners.

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**

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.

- Materials support teachers in guiding students to share their problem-solving approaches, including explanations. For example, in "Unit 3" "Lesson 11, Session 1," after students complete "Model It" questions 1–3, students respond to the "Discuss It" question and share their answers with a partner. To facilitate a whole class discussion the teacher will ask, "How do you know which direction to draw the jumps on the number line?" Students use the "Turn and Talk" strategy to share their responses with partners before the teacher calls on students to share their thinking with the whole class. Students are encouraged to build on the ideas they agree with by using their prior knowledge to help them understand how to multiply negative integers.
- Materials support teachers in guiding students to reflect on their problem-solving approaches, including explanations and justifications. For example, in "Unit 3" "Lesson 11, Session 1," students respond to "Reflect" problem 6. The problem asks, "You have explored how to multiply two integers when one is positive and the other is negative. Is the product of a positive integer and a negative integer always positive or negative? Explain." As students respond in their math journals, the teacher looks for understanding that a negative number and a positive number always have a negative product, regardless of the order of the factors.
- The materials encourage students to share their procedures and strategies. For example, the "Facilitate Whole Class Discussion" Section of "Lesson 15, Session 3" directs teachers to guide a discussion in which students consider multiple problem-solving approaches. As students share their approaches, the materials suggest that teachers should "Look for the idea that all of these strategies are useful and can lead to equivalent expressions but that specific strategies are more efficient or reasonable to use in specific situations."
- The materials encourage students to reflect on their procedures and strategies. For example, the *Teacher Guide* for "Exit Ticket" for "Lesson 14, Session 2" warns, "If students do not account for place value correctly, such as by calculating the difference -77.8-11 as -78.9, then

ask them how they could use estimation to make sure that their exact answer is reasonable and what to do if the estimate and exact answer do not agree."

- Teacher prompts found within the lesson materials include "Model It" and "Picture It" prompts with reflective questions that help guide teachers in giving feedback to students, including using models to explain their thinking.
- The materials support teachers in guiding students in reflecting on and explaining their problem-solving approaches through written and oral communication. For each task and question, the materials provide sample responses that teachers should look for within their students' work. Additionally, the materials offer sample questions for teachers to ask students and things to listen for in student responses to assess their understanding of solving the problems. For example, the "Facilitate Whole Class Discussion" Section provides teachers guidance for helping students explain their problem-solving process with prompts. The guidance is located under "ask" and "listen for."
- The materials provide teachers with guidance and prompts to help students reflect on and communicate mathematical arguments. For example, in the "Lesson 8, Session 1," "Prepare For" Section, teachers are provided with sample responses to a question that requires students to develop a mathematical argument for whether or not a given graph shows a proportional relationship. Teachers are also provided with some questions to ask students to help them better communicate their argument to the given audience.
- Within the "Model It" Sections of the materials, teachers are provided with guidance to support students in justifying that multiple strategies and models can be used to solve problems. For example, in the "Lesson 8, Session 2" "Model It" Section, students are asked to connect the models they presented with the models presented in the materials. They are asked to justify how transformations and dilations can be used to reveal the slope of a line.

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

- Materials offer guidance to assist teachers in providing explanatory feedback based on anticipated misconceptions. For example, in "Lesson 1, Session 1," the "Common Misconception" notes advise teachers to, "Listen for students who argue that triangle B or triangle C has the same shape as triangle A because of general appearance or orientation. As students share their strategies, ask them to define the terms that classify triangles according to their shape, such as isosceles and equilateral. Then encourage students to use these terms in their discussion."
- Materials offer guidance to assist teachers in providing explanatory feedback based on student responses. For example, in "Lesson 1, Session 2," students explore different ways to find actual lengths based on scale drawings. Students could have used a double number line to find the actual distance in the "Try It" problem or students could have used a scale factor. The "Model It" Section offers guidance on what to do if students use the models or another method to solve the problem. The section states, "If students presented these models, have students connect these models to those presented in class. If no student presented at least one of these models, have students first analyze key features of the model and then connect them to the models presented in class."

- The *Teacher Guide* includes "Common Misconception" notes throughout each lesson. For example, the "Unit 5 Overview" provides the following guidance on preventing misconceptions related to random sampling: "Students might think that random samples are taken without a plan or pattern based on everyday use of the word random. In fact, a random sample requires a careful plan to ensure that every member of the population has the same chance of being chosen."
- Each lesson quiz includes an answer key that explains the misconceptions that could have caused a student to choose a specific incorrect answer.
- Materials include tips for teachers on how to ask probing questions, encourage peer-to-peer discussions, and offer constructive and timely feedback. This supports the self-reflection of students throughout the lessons.
- Within each lesson, students have opportunities to practice solving problems for the concepts addressed in that lesson through both the practice and quiz portions. For both the lesson practice and the quiz, teachers are provided with sample responses to know what type of responses students should be producing, along with additional guidance on other strategies that students could use. For each multiple-choice and multi-select question, teachers are given guidance on potential student mistakes that could have led them to choose an incorrect answer choice.
- The materials provide teachers with anticipated student misconceptions of concepts and provide teachers with guidance on when and how to give feedback to students based on misconceptions. For example, "Lesson 15, Session 2" provides teachers guidance for addressing a misconception about combining terms that are not like terms, such as a constant term and a variable term. Throughout each unit, the "Math Background" Section provides insights into each concept, along with detailed explanations of common misconceptions.