

# IMRA Review Cycle 2024 Report



Publisher Name	Program Name
Curriculum Associates, LLC	Texas i-Ready Classroom Mathematics
Subject	Grade Level
Mathematics	6

**Texas Essential Knowledge and Skills (TEKS) Coverage:** 100%  
**English Language Proficiency Standards (ELPS) Coverage:** 100%  
**Quality Review Overall Score:** 212 / 227

## IMRA Reviewers

**Flags for Suitability Noncompliance** 2

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

**Flags for Suitability Compliance** 0

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

**Alleged Factual Errors** 3

## Public Feedback

**Flags for Suitability Noncompliance** 0

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

**Alleged Factual Errors** 0

**Public Comments** 0

# Quality Review Summary

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

## 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 provides guidance for interpreting and responding to student performance, offer guidance on using tasks and activities to address student performance trends, and include tools for students to track their own progress and growth.
- **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.
- 4.1 Depth of Key Concepts: Materials provide practice opportunities and instructional assessments that require students to demonstrate depth of understanding aligned to the TEKS, with questions and tasks that progressively increase in rigor and complexity, leading to grade-level proficiency in mathematics standards.
  - 4.2 Coherence of Key Concepts: Materials do not demonstrate coherence across courses or grade bands, lack a logically sequenced scope and sequence, fail to connect patterns, big ideas, and relationships between mathematical concepts, do not link content and language across grade levels, nor connect students' prior knowledge to new mathematical knowledge and skills.
  - 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.
  - 5.3 Balance of Conceptual Understanding and Procedural Fluency: Materials do not explicitly state how the conceptual and procedural emphasis of the TEKS are addressed, do not include questions and tasks that use concrete models, pictorial representations, or abstract representations, nor provide supports for students in connecting and explaining these models to abstract concepts.
  - 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: Formative and summative 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 of language proficiency as outlined in the ELPS and lack implementation guidance for bilingual/ESL programs.
- 5.5 Process Standards Connections: Materials do not include a description of how process standards are connected throughout the course including each unit process standard.

## Summary

*Texas i-Ready Classroom Mathematics* is a grade 6 Mathematics program. It offers explicit instruction for mathematics acquisition at the grade 6 level. The curriculum provides a multi-faceted approach to teaching mathematics at the grade 6 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 education in the classroom. This curriculum thoroughly includes activities to support emergent bilingual 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	<a href="#">Materials include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course.</a>	0/5
1.1b	<a href="#">Materials include suggested pacing (pacing guide/calendar) to support effective implementation for various instructional calendars (e.g., varying numbers of instructional days – 165, 180, 210).</a>	1/2
1.1c	<a href="#">Materials include an explanation for the rationale of unit order as well as how concepts to be learned connect throughout the course.</a>	2/2
1.1d	<a href="#">Materials include guidance, protocols, and/or templates for unit and lesson internalization.</a>	2/2
1.1e	<a href="#">Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.</a>	4/4

The 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.”

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**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.

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**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.

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**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.

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**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	<a href="#">Materials include comprehensive unit overviews that provide the background content knowledge and academic vocabulary necessary to effectively teach the concepts in the unit.</a>	2/2
1.2b	<a href="#">Materials contain supports for families in both Spanish and English for each unit with suggestions on supporting the progress of their student.</a>	2/2

**The 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	<a href="#">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.</a>	30/30
1.3b	<a href="#">Materials include a lesson overview outlining the suggested timing for each lesson component.</a>	1/1
1.3c	<a href="#">Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson.</a>	2/2
1.3d	<a href="#">Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, enrichment).</a>	1/1

**The 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 “Standards for Mathematical Practice (SMP),” content, and language objectives that are addressed throughout each session contained within that lesson. For example, the “Lesson 1” overview states “SMP 6 will be addressed in this lesson.” One of the content objectives provided is “Find the area of a parallelogram with whole-number side lengths by composing and decomposing,” and a language objective that states “Understand and use lesson vocabulary to explain the formula for the area of a parallelogram.”
- The materials provide tasks for students to complete within a suggested pacing timeline. The materials provide a list of needed materials for teachers and students to complete the lesson. Also, there are suggestions for digital integration.
- The materials provide tasks that allow students to discuss content objectives while also addressing the language standards of the lesson. For example, “Lesson 24, Session 3”

includes a “Facilitated Whole Class Discussion” task that directs the teacher to call on students to share various strategies for dividing whole numbers and unit fractions. This directly supports the content objective of representing and solving real-world problems involving division of unit fractions and whole numbers and the language objective of discussing how to describe and solve real-world problems involving division of unit fractions and whole numbers.

- The materials include a variety of assessments with each lesson, such as “Exit Tickets” and lesson quizzes. Each lesson includes a digital comprehension check. For example, “Lesson 30, Session 3” includes an “Exit Ticket” question that tasks students with correctly interpreting an expression verbally, which relates to the content objective of interpreting numerical expressions without evaluating the expression and the language objective of describing numerical expressions using words. The “Lesson 30” quiz includes a correlated task asking students to evaluate six expressions compared to the number 24.
- Daily lesson plans are structured and detailed. The lesson plans delineate how lesson activities should be paced and distributed across multiple sessions, when applicable.

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**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.”

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**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.

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**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	<a href="#">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.</a>	12/12
2.1b	<a href="#">Materials include the definition and intended purpose for the types of instructional assessments included.</a>	2/2
2.1c	<a href="#">Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments.</a>	2/2
2.1d	<a href="#">Diagnostic, formative, and summative assessments are aligned to the TEKS and objectives of the course, unit, or lesson.</a>	4/6
2.1e	<a href="#">Instructional assessments include standards-aligned items at varying levels of complexity.</a>	0/2

**The 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 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 1” has an “Exit Ticket” for each session that varies by type. In “Session 1,” students are asked to explain their reasoning when asked if the height of the parallelogram would change if it were measured from a different point on the base. In “Session 2,” students are asked to calculate the area of a parallelogram, show their work, and write their solution in a complete sentence. In “Session 3,” students are asked to draw two different parallelograms, each with an area of 12 square centimeters, and label the base and height of each.
- 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 7” 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; forms A and B are included. The question types in quizzes and unit assessments vary between multiple-choice, choose all that apply, fill-in-the-box, and open-ended questions.

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**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 the assessment 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" 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 1, Session 2" guides teachers on utilizing question prompts with paired discussions and how to address misunderstandings for the particular question.

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### **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.



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**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 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 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 16, Session 1” includes the objective “Solve unit rate problems, including problems involving constant speed and unit pricing.” “Lesson 16, Session 1” includes a variety of assessment questions. The session begins with a formative assessment in the form of a “would you rather” question that ties into the unit rate and the “better deal” scenario. Next, the session includes a partner discussion question around distance, speed, and time, and whether the subject can make it in time. The “Exit Ticket” asks students to explain how they could use unit rates to identify equivalent ratios, and the additional practice includes an open-ended question and an opportunity to check the work involved. The varied questions relate to unit rate problems, with some involving constant speed and unit pricing.
- 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 16” quiz aligns with the objectives of solving unit rate, and offers five questions: one multiple-choice, two open-ended, one table of true/false statements, and one griddable question.
- The materials provide formative and summative assessments throughout the materials that are not aligned to the TEKS. They are aligned with the process standards.
- 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.

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**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 21 has five questions: two at the DOK 1 level and three at the DOK 2 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 and twelve DOK 2 questions, and 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 6 comprehension check "Use Part-to-Part and Part-to-Whole Ratios" includes multiple-choice, open-response, and inline-choice items.

## Progress Monitoring

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

**The 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 “Apply It” question in “Lesson 1, Session 2” asks students to determine which parallelograms have an area of 48 square units, given the base and height of five different parallelograms. Three answer choices are correct, and guidance is given to how students may have calculated the incorrect answers to be 48 square units, leading teachers to address the formula application. The “Exit Ticket” in the same session has students calculate the area of a drawn parallelogram, allowing students to show their mastery after any possible reteach. The “Exit Ticket” question is open-ended, and the materials provide guidance on what understanding correct solutions show, along with potential error analysis for common errors.
- 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 *Teacher’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 reteaching. It also includes extension activities for students who exceed proficiency on the unit assessment.
- The materials suggest activities teachers can provide to students based on their performance. These are found in a small box in the *Teacher’s Guide* 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 explains one method that students could use to correctly answer problem number one, which asks students to determine the least common multiple of two values. The answer key then explains why each alternative answer choice is not correct. The rationale for answer choice A states, "A is not correct. The answer represents a factor of 15 and 45."
- 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.

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**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, reinforcement, or 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 model the division of a fraction by a whole number, to support the learning in the “Connect It” Section where students are expected to divide fractions by whole numbers.
- 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 6” quiz on greatest common factors and least common multiples recommends that teachers use “Tools for Instruction– Find the Least Common Multiple” to adjust instruction for students who struggle on the quiz.

## **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	<a href="#">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.</a>	3/3
3.1b	<a href="#">Materials include pre-teaching or embedded supports for unfamiliar vocabulary and references in text (e.g., figurative language, idioms, academic language). (T/S)</a>	2/2
3.1c	<a href="#">Materials include teacher guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.</a>	3/3

**The 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 documents also provide 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 1," "Differentiation: Reteach or Reinforce" reads, "If students are unsure about the idea that figures with different perimeters can have the same area, then have them experiment with rectangles of different shapes." 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 3," 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 30, Session 2" explains how to use a word model to analyze a numeric expression.
- The materials provide frequent guidance regarding common misconceptions. For example, the "Common Misconception" box for the "Lesson 30" "Exit Ticket" warns that students often forget to follow the order of operations. 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 students' data from the diagnostic assessment.

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**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 2, Session 3" reads, "Why? Use prefixes to clarify meaning. How? Display decompose and compose and ask students to circle these words in the Model Its. . ." 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 2, Session 1," the guidance states, "Read aloud the term parallelogram or call on a student to do so. Ask students to show examples of parallelograms. Then ask students to explain what they should write in each section of the graphic organizer."

- 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 emergent bilingual students. This guidance utilizes best practices for supporting students in mastering unfamiliar academic vocabulary. For example, "Lesson 9, Session 1," "Levels 1-3: Listening/Speaking" advises, "Begin a co-constructed word bank of big ideas that might be included in discussion about the bar model, such as equal parts, parts, sizes, and fractions."
- 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 emergent bilingual students. 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," "Find the Area of a Parallelogram," for students in "Levels 1–3: Speaking/Listening" instructs teachers to "Read the problem aloud. Have students locate and read the bold terms in the Interactive Glossary. Then help them read the definitions. Use gestures and sketches to explain as needed."
- The "Lesson Overview" provides a "Start" Section, which includes a short activity to help students connect to prior knowledge. For example, in "Lesson 1," "Finding the Area of a Parallelogram," students analyze a graphic organizer to recognize how the characteristics of a rhombus, square, rectangle, and trapezoid are the same and different. Possible student solutions are included in this activity.
- The "Lesson Overview" includes a page with an assignment that supports vocabulary development. For example, "Lesson 1, Session 1," "Prepare for Finding the Area of a Parallelogram" contains a graphic organizer that helps students organize their information about the math term *area*. The word *area* is in the middle of the page. Five boxes branch out from the word *area*, 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 the area. In the last three boxes, students provide examples of three different representations of the area. Teachers can pair students to complete the graphic organizer and share their work with the class. This leads to a discussion of the definitions, properties, and examples provided.

**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 3," the "Refine" Section reads, "Identify grouping for differentiation based on the Start and problem 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," "Finding the Area of a Triangle," students deepen their understanding by using structure to relate a triangle to a parallelogram. The activity prompts students to think about how a figure for which they do not know an area formula can be transformed into a figure with a known area formula.
- 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 the Area of Triangles and Other Polygons," the on-level activity has three sections. In the "What You Do" Section, students use a game board to evaluate expressions and then match a polygon on the game board with an area determined using the expression. In the "Check for Understanding" Section, students write and evaluate an expression for the area of a given polygon. In the "Go Further" Section, students choose a polygon from the game board but write and evaluate a different expression for the area of the polygon than the expression already used in the game. The instructions list the materials needed to complete the activities.
- The "Extend" tab offers enrichment activities for each lesson in a unit. For example, "Building Shapes" is the enrichment activity in "Lesson 2," "Find the Area of Triangles and Other Polygons." The challenge is to build different polygons with given areas using triangles, rectangles, and parallelograms. A graphing technology program helps students answer four questions as they explore using the fewest number of triangles, rectangles, and/or parallelograms to build a polygon with a given area and a given number of sides.

## Supports for All Learners

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

**The 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 1, Session 3," the "Differentiation: Reteach or Reinforce" boxes guide teachers to have students use tangrams to form squares, rectangles, and parallelograms using triangle pieces.
- 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 1, Session 3," the following guidance is provided to teachers: "Guide students in understanding the example. Ask: How can you use what you know about finding area to find the unknown height?" 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 and samples of the types of responses teachers should hear. For example, in "Lesson 2, Session 1," the following guidance is given to teachers: "Clarify the phrase as in a parallelogram. Review the term it corresponds to."

- 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 30, Session 2" explains how to use a word model to analyze a numeric expression.
- The "Lesson Overview" in the "Teacher Toolkit" includes guidance to support the teacher in explicitly modeling the concepts. For example, in "Lesson 4, Session 2" of "Develop Writing and Interpreting Algebraic Expressions," teachers select and sequence student strategies to write and interpret an algebraic expression for the "Try It" problem. The guidance states, "Select 2-3 samples that represent the range of student thinking in your classroom. Here is one possible order for class discussion: using visual models that show 8 husks and 3 bags, each with an unknown number of corn husks, using a misconception for writing a numerical expression that does not include a variable, and writing an expression that utilizes a variable to stand for the unknown quantities."
- The "Lesson Overview" in the "Teacher Toolkit" includes prompts to support the teacher in communicating the concepts explicitly. In "Lesson 4, Session 2" of "Develop Writing and Interpreting Algebraic Expressions," the "Facilitate Whole Class Discussion" Section has students compare and connect their algebraic representations of the problem. An "Ask" prompt is provided for the teacher: "How do [student name]'s and [student name]'s models show the total number of husks?"
- The "Lesson Overview" in the "Teacher Toolkit," includes guidance and prompts to support the teacher in explaining the concepts explicitly. For example, in "Lesson 4, Session 2" of "Develop Writing and Interpreting Algebraic Expressions," the "Analyze It" and "Model It" Sections state, "If students presented these models, have students connect these models to those presented in class. If no students presented at least one of these models, have students first analyze key features of the models, and then connect them to the models presented in class. Ask: How are the expressions  $6a + 5c$  and  $6(2) + 5(3)$  similar? How are they different? Listen For: In both expressions, 6 and 5 are factors of the term. In the second expression, the variables are replaced with numbers, but the second expression can be evaluated."

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

- The "Reteach" tab for "Lesson 6: Find Greatest Common Factor and Least Common Multiple" guides lesson facilitation that engages students in structure and repeated reasoning to find the lowest common denominators. The "Step by Step" Section directs teachers to use two number cubes to generate two pairs of numbers between two and twelve, record and complete the data in a table by multiplying by one, two, and three to show the first eight multiples and find the LCM. Guidance is provided to aid students in exploring other strategies to find the LCM of two numbers. Students then summarize some strategies to find the LCM of two numbers without writing multiples or using a factor tree.

- The "Lesson Overview" for "Lesson 6: Find Greatest Common Factor and Least Common Multiple" includes a "Connect to Culture" Section which guides where the activities are applied in each lesson. For example, teachers use the paragraph about architects making floor plans in the "Try It" Section of "Session 1." An additional paragraph about sheep's wool applies to the "Try It" Section in "Session 3." A cultural connection explains how students in Mexico and other Latin American countries display prime factors of a number using a vertical line instead of a factor tree. The overview also includes "Protocols for Engagement," which includes guidance on using instructional strategies such as "Silent Partner" to support partner discussion in the "Discuss It" Section of "Session 1."
- 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 30, Session 1" asks students to share their choice of strategy with a partner and 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 emergent bilingual students. This guidance utilizes best practices for supporting students in mastering unfamiliar academic vocabulary. For example, "Lesson 9, Session 1," "Levels 1–3: Listening/Speaking" advises, "Begin a co-constructed word bank of big ideas that might be included in the discussion about the bar model, such as equal parts, parts, sizes, and fractions."
- 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 guide 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 through it. Students complete it 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.

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**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	<a href="#">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.</a>	0/2
3.3b	<a href="#">Materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs.</a>	0/1
3.3c	<a href="#">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.</a>	8/8
3.3d	<a href="#">If designed for dual language immersion (DLI) programs, materials include resources that outline opportunities to address metalinguistic transfer from English to the partner language.</a>	Not scored

The materials include teacher guidance on providing linguistic accommodations for various levels of language proficiency. Materials do not include a correlation with the English Language Proficiency Standards (ELPS). 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.

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 emergent bilingual students. 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 9, Session 1," "Levels 1–3: Listening/Speaking" advises, "Begin a co-constructed word bank of big ideas that might be included in the discussion about the bar model, such as equal parts, parts, sizes, and fractions."

- 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 emergent bilingual students based on students' individualized language development levels. For example, in "Lesson 1," "Find the Area of a Parallelogram," the instructions in "Levels 1–3: Speaking/Listening" ask teachers to "Read the problem aloud. Have students locate and read the bold terms in the Interactive Glossary. Then help them read the definitions. Use gestures and sketches to explain as needed."

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**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 emergent bilingual students. 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.
- 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 locate resources 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 supporting 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 2, Session 2" "Finding the Area of a Triangle," students deepen their understanding by using structure to relate a triangle

to a parallelogram. The activity prompts students to think about how a figure for which they do not know an area formula can be transformed into a figure with a known area formula.

- The "Lesson Overview" includes a page with an assignment that supports vocabulary development. For example, in "Prepare For Unit 1," students list what they know about the terms in the vocabulary table. Students work with a partner to fill in as much of the table as possible. Students can use models or manipulatives to support their work. 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.

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**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.
- The "Differentiation: Reteach or Reinforce" and "Differentiation: Extend" boxes similarly support metalinguistic transfer. For example, the "Differentiation" box that follows the "Lesson 18 Quiz" recommends a "Reteach" activity that discusses the connection between the phrase "original price" and its cognate.

## Depth and Coherence of Key Concepts

4.1	Depth of Key Concepts	3/3
4.1a	<a href="#">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.</a>	1/1
4.1b	<a href="#">Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.</a>	2/2

**The 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 provide practice opportunities that engage students in the appropriate grade-level rigor identified in the TEKS. For example, in "Lesson 18, Session 3," the "Model It," "Connect It," and "Apply It" Sections have students solve problems where they need to determine the whole of a part-to-whole comparison of percent proportions. The problems are a mixture of numeric responses, multiple-choice, 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 that involve making models to show the relationship between the part and the whole in a percent problem.
- 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 18, Session 4," where a math journal activity asks students to select a percentage from a list and then write and solve a word problem that involves finding the whole. Lesson quizzes contain questions of varying complexity that have students solve problems within mathematical and real-world contexts.
- Practice opportunities vary in complexity, as illustrated by the depth-of-knowledge levels provided in the materials for "Apply It" problems. For example, in "Lesson 1, Session 3," "Apply It" includes questions of varying depths of knowledge. "Problem 1," considered depth-of-knowledge level 2, asks students to find the area of a pair of parallelograms drawn on a grid. Students must use their understanding of parallelograms to determine the relevant dimensions of each parallelogram before calculating the areas. "Problem 2," in contrast, provides students with a labeled diagram that includes the dimensions of a parallelogram. Since students do not have to determine the dimensions, this problem is considered depth-of-knowledge level 1. "Problem 3" is considered depth-of-knowledge level 3, because students must interpret a verbal description, use the information provided to determine the area of a

parallelogram, and then analyze why another student incorrectly chose D. This progression allows students to achieve a depth of understanding of the area of parallelograms, as required by TEKS 6.8D.

- The materials include guidance designed to help teachers develop depth of understanding. For example, in "Deepen Understanding" of "Lesson 2, Session 2," teachers ask students to analyze why a triangle is decomposed into a specific arrangement. It then provides a discussion guide designed to help students see that the specific arrangement of the triangles in the model can be used to create a parallelogram, illustrating the connection between the formulas for the areas of parallelograms and triangles.
- 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 grade 6, "Unit 1, Session 2," "Math in Action," the materials provide open-ended, multi-step problems with real-world connections, such as, "Juan wants to limit the number of trips he takes to the store to buy supplies for the hens. Juan has storage for a maximum of 500 pounds of grain and 300 pounds of straw. How often do you recommend that Juan shop for supplies? What will he buy on each trip?"
- Practice opportunities in the materials engage students in the appropriate level of rigor identified in the TEKS. For example, in grade 6, "Lesson 7," students explain and justify strategies for adding and subtracting multi-digit decimals in partner and class discussions. Visual models help students connect adding and subtracting to the standard algorithm as they respond to questions in writing. Students also interpret word problems about multi-digit decimals by using strategies like "Three Reads" or "Co-Craft Questions."

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

- The materials include scaffolding questions that connect concepts within and across lessons, modules, and units. For example, in grade 6, "Lesson 7," students extend their conceptual understanding of addition, subtraction, and multiplication of decimals by using concrete models learned in grade 5 and connecting them to the standard algorithms with fluency. Questioning in real-world problems includes: "How does the model show using place value?" "How does your model show the place value of each digit in the numbers?" and "Why is it important to line up decimals by place value in order to add and subtract them?"
- The questions and tasks included in the materials progressively increase in rigor and complexity. For example, "Lesson 1" introduces the area of parallelograms, a component of TEKS 6.8D. During "Session 1," students determine the area of a parallelogram drawn on grid paper by counting the number of squares covered by the figure, and they practice identifying the base and height of various parallelograms. In "Session 2," students learn to determine the area of parallelograms by decomposing them into triangles and rectangles and then rearranging the shapes to form rectangles. Next, the materials introduce the formula for the area of a parallelogram,  $A = bh$ , and they provide several opportunities for students to practice using the formula to determine areas in real-world and mathematical contexts.
- The questions and tasks included in the materials lead to grade-level proficiency. For example, "Lesson 1" begins by asking students to determine the area of parallelograms by



counting the number of squares covered by figures drawn on a grid. The questions and tasks presented throughout the lesson increase in complexity so students achieve grade-level proficiency by the end of the lesson. For example, "Problem 9" in the "Refine" Section of "Session 3" requires students to interpret a word problem involving parallelograms, create a visual model to represent the parallelograms in the problem, and use the formula to identify dimensions of the parallelograms that would cause them to have equivalent areas.

- The materials include various questions that progressively increase in rigor and complexity. For example, in "Lesson 18, Session 3," 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 make general observations 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 materials include various tasks within each lesson that progressively increase in rigor and complexity. For example, in "Lesson 18," where students use percentages to solve problems, the sessions begin by having students explore finding percentages given both the part and whole using tables and proportions within scaffolded questions. The following session has students draw on prior knowledge of hundreds grids to develop an understanding of the academic vocabulary of percent by using a graphic organizer. The session also extends student learning from previous sections to compare different percentages. In later sessions, students are introduced to tape diagrams and double number lines to help them solve and analyze problems with percentages while still embedding the hundreds grids that students are already familiar with. At the end of the lesson, students work through sessions to apply and refine their understanding of the concepts introduced throughout the lesson.



## Depth and Coherence of Key Concepts

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

**The 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 12," students learn that ratios compare two or more quantities. Students use ratio language and different ratio formats to demonstrate their understanding that ratios represent relationships between quantities. Vertical progression starts in grade 4, where students solve real-world problems involving solutions for every and for each. In grade 5, students gain fluency in calculating the factors and multiples of whole numbers which helps them solve real-world problems involving multiplication and division. This creates the path for solving problems with ratios and rates. In grade 6, students further their understanding of ratios to identify, generate, and understand equivalent ratios. They will explore rates and use unit rates to solve problems. In grade 7, students will use what they know about ratios to compute unit rates with ratios involving fractions.
- 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 unit's themes are connected to prior and future grades. For example, in "Unit 1," students will build on prior knowledge of area, numerical expressions, and multiplication. The first unit theme states,

"You can use what you know about the area of a rectangle to find the area of other two-dimensional figures and to find the surface area of three-dimensional figures." Another example can be found in the "Unit 1" "Math Background" document which explains, "Students have been using exponents in abbreviations for units of area, such as  $\text{in}^2$  for square inches and  $\text{ft}^2$  for square feet. Show them the corresponding abbreviations for cubic units of volume,  $\text{in}^3$  and  $\text{ft}^3$ ."

- 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 1" "Lesson Progression" shows how ideas across grade bands build upon each other: grade 5, "Lesson 7" builds up to grade 5, "Lesson 30," which then builds up to grade 6, "Lesson 4" and "Lesson 5." From here, students will continue to apply concepts in grade 8, "Lesson 20" and grade 8, "Lesson 22."
- 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.

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

- The materials include a "Math Background" Section at the beginning of each unit that shows how various big ideas are connected across units. For example, "Unit 1" shows how the big idea of expressions and equations will impact student learning as they progress to solving problems about area, volume, rates, and ratios in later units. Another example can be found in "Unit 1," where students build on what they know about finding the area of a rectangle. By decomposing shapes and rearranging the parts into rectangles, they relate the space inside parallelograms, triangles, and other polygons to the area of a rectangle. Later in the year, students will use area formulas to solve volume problems.
- 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 video for "Unit 4" outlines how students will use patterns discovered in "Unit 3" about proportional relationships to make connections and develop an understanding of ratios and rates.
- 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. 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 using decomposition to determine the area of a parallelogram in the current lesson will prepare students to calculate the areas of other polygons in the following lesson.

- The "Math Background" Section clearly shows how the lessons in units build on one another and spiral concepts throughout the year. For example, in "Unit 1," students build on what they know about finding the area of a rectangle. By decomposing shapes and rearranging the parts into rectangles, they relate the space inside parallelograms, triangles, and other polygons to the area of a rectangle. Later in the year, students will use area formulas to solve volume problems.
- The "Teacher Toolbox" includes an "Understanding Content Across Grades" document. The 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 2," students build upon grade 5 knowledge of adding, subtracting, and multiplying decimals as they incorporate multi-digit decimals in the current lessons. Students are preparing to add and subtract positive and negative numbers and understand multiplication with negative numbers.

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

- The materials continue to reinforce and build upon vertically aligned content learned previously, reinforcing vocabulary and academic language within learning strands. For example, the "Unit Overview" for "Unit 1" includes the new vocabulary, review vocabulary, and academic vocabulary needed for each lesson. "Lesson 1" includes new vocabulary such as *base* (of a parallelogram), and *height* (of a parallelogram). The vocabulary to review is *area*, *compose*, *decompose*, *dimension*, *parallelogram*, and *perpendicular*. The academic language used in this unit is *corresponds to*. These same vocabulary words are used in "Lesson 2," adding the vocabulary of *base* and *height* of triangles in addition to the new academic word, *represent*. Vocabulary words like *area*, *base*, and *height* were introduced in "Prerequisite Lesson," grade 4, "Lesson 16."
- 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 2" explains that in grade 5, students used concrete base 10 blocks and pictorial representations of base 10 blocks, as well as strategies (like tables) based on place value to add and subtract decimals. In grade 6, students build on these strategies as they develop fluency with standard algorithms. They move beyond concrete and representational models and utilize strategies that show conceptual understanding, such as filling in place value with zeroes to make it easier to work with decimals.
- 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 1, Session 1" activates prior knowledge by asking students to explain how the terms *rhombus*, *square*, *rectangle*, and *trapezoid* are the same and how they are different.
- 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 "Lesson 1" explains how using decomposition to determine the area of a parallelogram in the current lesson will prepare students to calculate surface area in grade 7.

- 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.

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**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 content and procedures from both 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 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 skills learned in that unit. For example, in "Lesson 2, Session 1," the "Explore" Section has students use procedures they previously learned about finding the area of parallelograms and apply them to the new skill of finding the area of a triangle. Additionally, each lesson includes a "Connect to Prior Knowledge" Section where students apply procedures previously learned from earlier in the course or at a previous grade level. In this session, students compare four different quadrilaterals and use the procedures for finding perimeter and area to explain what is the same or different about each one, tying into what the student learned earlier in the course and will apply later 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 2, Lesson 7" shows what students learned in grade 5 that will support them in this lesson, and how this lesson will impact the next and future lessons in grade 7. 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 2, Lesson 7" "Prior Knowledge" Section states that before starting this lesson, students should understand decimal place value and how to use concrete models to perform decimal operations.
- The materials intentionally connect students' prior knowledge from previous grades to new mathematical knowledge and skills addressed in the current course. For example, the

"Connect to Prior Knowledge" Section for "Lesson 1, Session 1" activates prior knowledge by asking students to explain how the terms *rhombus*, *square*, *rectangle*, and *trapezoid* are the same and how they are different.

- The materials intentionally connect students' prior knowledge from previous lessons to new mathematical knowledge and skills addressed in the current lesson. For example, "Lesson 2, Session 2" includes a "Deepen Understanding" extension, in which students are challenged to use their knowledge of parallelograms from the previous lesson to recognize a method that can be used to determine the area of a triangle in the current lesson.
- The "Teacher Toolbox" provides a student activity that uses prior knowledge to help students build on academic vocabulary to prepare for each unit. For example, "Unit 1" uses a table for students to list what the measurement is, how to find the measurement for the shape shown, formulas needed for the shape shown, examples of units used in measurement for the shape shown, situations the measurement could be used for, and related words for each type of measurement.
- "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, as well as prepares students for future lessons. For example, in "Unit 7," students build upon grade 4, "Lesson 22" and grade 5, "Lesson 27." In grade 6, "Lesson 29," students collect and record data to answer statistical questions. Students also make and interpret bar graphs and line plots and solve problems based on the data. The progression of this strand prepares students for grade 7, "Lesson 22."

## Depth and Coherence of Key Concepts

4.3	Spaced and Interleaved Practice	8/8
4.3a	<a href="#">Materials provide spaced retrieval opportunities with previously learned skills and concepts across lessons and units.</a>	4/4
4.3b	<a href="#">Materials provide interleaved practice opportunities with previously learned skills and concepts across lessons and units.</a>	4/4

**The 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 18, Session 3," the "Teacher Toolkit" includes fluency and skills practice for finding the whole given the percent and the part. The "Teacher Toolkit" includes a variety of interactive games for students to practice skills. For example, in "Unit 1, Lesson 6," two games engage students with building fluency in the prerequisite skills of identifying multiples and factors of various numbers, along with games for greatest common factor and least common multiple to build fluency with the grade level skills in that unit.
- The materials provide spaced retrieval opportunities with previously learned skills across lessons. For example, in "Unit 1," students build upon the knowledge of using pictorial and concrete models and strategies based on place value to add and subtract decimals. In the current lessons, students continue to build on these strategies while adding new strategies to develop fluency with standard algorithms. To add and subtract decimals, students use zeros as placeholders to align numbers by place value and regroup as needed. These concepts are incorporated in the "Prepare," "Reteach," "Reinforce," and "Extend" Sections throughout the unit. The unit also provides interactive tutorials for subtracting decimals, multiplying a decimal by a decimal, and adding decimals.
- The materials provide spaced retrieval opportunities with previously learned concepts within the units and lessons. For example, in "Lesson 18, Session 1," students use previously learned information about representing percents from "Lesson 17" and apply it to solving problems where they find missing percents and make comparisons. Additionally, in "Lesson 18, Session 3," students apply concepts from "Session 2" on using double number lines to solve percent proportions.
- Both the *Teacher's Guide* and the *Student Worktext* provide cumulative practice at the back of the book that is 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 5, Set 5," the cumulative practice on equivalent ratios allows students to practice with concepts previously learned in "Lesson 13."

- 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, "Problem 4" of "Lesson 4, Session 2" requires students to use their prior knowledge of parallelograms to write algebraic expressions. In this way, the materials require students to practice applying concepts from past lessons in the current lesson, which is focused on algebraic expressions.
- The materials include routines that require students to use previously learned skills throughout the lessons. For example, in "Lesson 12," the "Start" activity prepares students to explore ratios by accessing prior knowledge of multiplicative comparison. In the "Discuss It" Section, students compare and connect the different ways ratios are written, which is prior knowledge from a previous lesson. Students are also given the opportunity for extra practice through the "Prepare for Understanding of Ratio Concepts" activity where students complete a graphic organizer for the academic word *compare*.

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**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 skills across units and lessons. For example, in "Lesson 7," students use what they know to solve the problem in the "Try It" Section. The problem asks, "What is his total time for the two laps?" Students can solve using base-ten blocks, base-ten grid paper, number lines, or a place value chart. Students can use these same strategies in the "Additional Practice" Section of the lesson.
- 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 by using the formula for the area of a triangle. Students complete a problem by matching algebraic expressions that represent the same value. Students use the order of operations to simplify and find the value of an expression.
- Each unit includes interleaved practice opportunities linking current content to previously learned skills and concepts. For example, "Lesson 2, Session 4" requires students to apply their knowledge of previously studied polygons to calculate the areas of composite figures.
- 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 1" has two different "Math in Action" lessons where students apply the concepts of area, surface area, and algebraic expressions to solve real-world scenarios of buying hens and designing an outdoor classroom.



- 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 30, Session 3" "Practice" Section, students solve problems to determine whether a dot plot or a histogram is the best strategy to represent the problem. 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 5" TEKS practice, students decide which strategy they should use to determine the solution to problems involving percentages.

## Balance of Conceptual and Procedural Understanding

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

**The 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 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 The Area of a Parallelogram," the "Try It" problem shows a grid with a rectangle and a parallelogram with no dimensions labeled or given in the problem. Students can choose to model the problem on grid paper, geoboards, or tracing paper to answer the question, "Does Alec's kite use more paper than Kenji's kite?" Students use prior knowledge of the area of rectangles and decomposing figures to guide them in their understanding of the problem.
- The first lessons that cover a concept start with models to build conceptual understanding. For example, in "Lesson 3, Session 1," "Explore Nets of Three-Dimensional Figures," students use nets to explore the idea that three-dimensional figures are constructed from two-dimensional figures. Students understand that surface area is the sum of the areas of each two-dimensional figure that forms the three-dimensional figure.
- The materials include questions that require students to consider multiple ways of representing mathematical concepts. For example, when finding the area of a composite figure in "Lesson 2, Session 3," students are asked to analyze one decomposition strategy and to create their model showing an alternative strategy. Successful completion of this task requires students to analyze and evaluate multiple models that explain the same concept.
- The lessons include tasks that require students to use multiple models to represent mathematical concepts. For example, in "Lesson 1, Session 1," students use both a diagram and a geoboard to illustrate different strategies for decomposing a parallelogram.

- 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 for mathematical concepts and situations. For example, the "Lesson 1" family letter has students interpret the construction and properties of parallelograms. Students help their families interpret the properties by asking questions like, "What do you notice that is the same about all your shapes?"
- 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 1, Session 1," students use different representations for parallelograms to establish definitions for area.
- 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 bar models to analyze the concept of dividing fractions.
- 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 6, Session 2," students use tree diagrams to evaluate finding the least common multiple, and later, in "Session 3," students use visual models like a hundreds chart to evaluate the same concept.

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

- The lessons include tasks that require students to create models to represent mathematical concepts. For example, in "Lesson 1, Session 1," students work with a partner to use a geoboard to illustrate different strategies for decomposing a parallelogram. In the same session, students are asked to use grid paper to create a representation that shows one or more strategies that can be used to decompose a parallelogram.
- The materials include questions that require students to create a variety of models. For example, in "Lesson 2, Session 2," students explore different ways to find the area of a triangle that represents a mural on a school wall. Students are asked to find the area of a triangle by decomposing the triangle into two right triangles and then composing the triangle with a copy of itself to form a parallelogram.
- The materials include tasks that allow students to apply their knowledge to represent mathematical problems. For example, in "Lesson 2, Session 3," students find the area of a polygon that represents a superhero costume. Students use models of polygons to solve for the area of an unknown shape in the situation.

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

- The materials include tasks that allow students to apply their knowledge to real-world problem situations. For example, in "Lesson 1, Session 1," "Problem 3" asks students to use their knowledge of rectangles and parallelograms to determine which of two plans for a parking lot requires a larger amount of space.
- The materials include questions that allow students to apply their knowledge to mathematical problems. For example, the "Lesson 1, Session 2" "Picture It" problem asks students to use their knowledge of rectangles and parallelograms to write an expression that can represent the area of a parallelogram.

## Balance of Conceptual and Procedural Understanding

5.2	Development of Fluency	12/12
5.2a	<a href="#">Materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level tasks.</a>	<b>2/2</b>
5.2b	<a href="#">Materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures within the lesson and/or throughout a unit.</a>	<b>3/3</b>
5.2c	<a href="#">Materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the lesson and throughout a unit.</a>	<b>6/6</b>
5.2d	<a href="#">Materials contain embedded supports for teachers to guide students toward increasingly efficient approaches.</a>	<b>1/1</b>

**The 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 *i-Ready* online learning platform includes a variety of tools that promote the development of fluency and automaticity. "Learning Games" help students master essential skills, "Interactive Practice" provides students with additional digital practice opportunities, and "Cumulative Practice" allows teachers to assign content from previous units.
- The materials include "Fluency and Skills Practice" activities. These activities provide additional practice that supports students in developing fluency with essential skills.

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

- The materials provide opportunities for students to practice utilizing procedures efficiently. For example, in "Unit 4," students work with percents for the first time. Throughout the unit, students develop an understanding that percent is a rate per 100, use bar models or double number lines to represent relationships involving percents, and finally, understand that percents are an efficient way to compare two or more part-to-whole ratios.

- The materials encourage students to use flexibility in applying procedures. For example, the "Discuss It" Section of "Lesson 8, Session 2" asks students to respond to questions with a partner. The questions include, "How is your strategy similar to mine? How is it different?"

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**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 "Model It" Section of "Lesson 8, Session 2" directs teachers to ask students, "Why is 300 the most efficient choice for the first partial quotient?"
- The materials encourage students to evaluate their procedures and strategies for reasonableness and accuracy. For example, the "Facilitate Whole Class Discussion" Section of "Lesson 8, Session 4" directs teachers to "Look for understanding that estimation can be used to check for a reasonable answer," and to ask, "How is estimating useful when checking for a reasonable answer?"

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

- The materials support teachers in guiding students toward efficiency. For example, the "Math Background" Section for "Unit 3" encourages teachers to utilize ratio tables to help see multiplicative patterns between values. It explains that "After solving several problems in this way, some students may develop a more efficient strategy based on their prior knowledge of least common multiples."
- The materials include guidance that teachers can use to help students develop efficiency in their mathematical strategies. For example, the "Model It" Section of "Lesson 8, Session 2" explains how to use partial quotients as a strategy for long division. This component includes questions for teachers to ask their students, such as, "Why is 300 the most efficient choice for the first partial quotient?" and "How does using the standard algorithm help you know there is a more efficient choice for the number of hundreds in the quotient?"

## Balance of Conceptual and Procedural Understanding

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

**The 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 *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.
- 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.



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

- The materials include both concrete models and pictorial representations. For example, "Lesson 9, Session 1" represents fraction division physically with folded paper and pictorially with bar models.
- The materials include abstract representations that are appropriate for the grade level. For example, "Lesson 9, Session 1" begins with concrete and pictorial representations of fraction division and then progresses to abstract representation with algebraic expressions.
- The materials provide teachers guidance on including concrete models, representational models, and abstract representations for each concept. The "Math Background" Section incorporates detailed drawings, visual representations, symbolic notations, numeric expressions, and algorithms to illustrate concepts like proportional relationships.

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**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 2, Session 2" uses grid paper to illustrate how a triangle can be decomposed and rearranged to form two rectangles. It then uses algebraic expressions to demonstrate that the area of the triangle is equal to one-half of the area of the sum of the rectangles.
- The lesson materials provide students with multiple practice opportunities consisting of standards-aligned tasks to work towards mastery of grade-level content. In "Success Central" under "Plan and Teach," the "Support Student Practice" Section provides a "Practice Opportunities Reference Sheet," which is an overview of the variety of practice opportunities and their location. For example, the student texts include lesson-level and session-level practice opportunities such as "Apply It" problems and the "Practice Pages" in the "Explore" and "Develop" Sections. The "Teacher Toolkit" provides "Fluency and Skills Practice" activities that can be printed or assigned digitally.

## Balance of Conceptual and Procedural Understanding

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

**The materials provide opportunities for students to develop their academic mathematical language using visuals, manipulatives, and other language development strategies. Materials include embedded guidance for the teacher 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 they will need for the current unit of study. For example, the "Connect to Prior Knowledge" component for "Lesson 1, Session 1" activates prior knowledge by asking students to explain how the terms *rhombus*, *square*, *rectangle*, and *trapezoid* are the same and how they are different.
- The materials use manipulatives to develop academic language. For example, "Lesson 9, Session 1" uses paper-folding as a hands-on tool to illustrate the concept of fraction division. When students fold a piece of paper into halves and then fourths, they see that each half contains two-fourths. This process illustrates that dividing by a fraction is equivalent to multiplying by the reciprocal of the divisor.

**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 2, Session 1" asks students, "What did you do first to find the area that the decals cover? Why?" It then directs them to respond using the stem, "I started by... because..."
- The materials include dialogue structures that help students verbally practice utilizing new vocabulary. For example, the "Discuss It" Section of "Lesson 2, Session 2" asks students, "How is your strategy for finding the area similar to mine?" It then directs them to talk with their partner using the stem, "My strategy is similar to yours because..."

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**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 2, Session 1" "Try It" problem provides two samples of ideal student responses.

## Balance of Conceptual and Procedural Understanding

5.5	Process Standards Connections	4/6
5.5a	<a href="#">Process standards are integrated appropriately into the materials.</a>	1/1
5.5b	<a href="#">Materials include a description of how process standards are incorporated and connected throughout the course.</a>	1/2
5.5c	<a href="#">Materials include a description for each unit of how process standards are incorporated and connected throughout the unit.</a>	1/2
5.5d	<a href="#">Materials include an overview of the process standards incorporated into each lesson.</a>	1/1

**The 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 "Facilitate Whole Class Discussion" Section for "Lesson 17, Session 1" recommends that teachers prompt students to "talk about how the bar model can be used to represent other percents."
- 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 should recognize they can calculate 100% of the earnings by multiplying 10% of the earnings by 10, as shown on the double number line. The materials also state that "Students should understand that they can use equivalent ratios to find the whole."

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**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 encourage mathematical communication. For example, the "Facilitate Whole Class Discussion" Section for "Lesson 2, Session 1" recommends that teachers "Call on students to share selected strategies," using the "Compare and Connect" strategy to analyze different ways to arrange the triangles to form a parallelogram.

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**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 the Mathematical Process Standards (MPS) and makes connections to student engagement protocols throughout the lesson's instructional framework routine. There is no description of how process skills connect throughout the unit.

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

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

Evidence includes, but is not limited to:

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

- The 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 other components of the lessons, they encounter real-world problems and models that require them to think mathematically to solve them. For example, in "Lesson 19, Session 3," students are asked to think about which dimensions an architect should use for his design using the concept of the greatest common factor.
- The materials provide students with opportunities to persevere through problem-solving. The materials provide opportunities for students to develop strategies for persisting through problems. For example, in "Lesson 19, Session 1," if students are unsure about using a greatest common factor with expressions for the area, the materials provide them with concrete models to help them persevere through the problem.
- In the practice and quiz portions of each lesson, the materials include problems that vary in complexity and provide challenge questions that require students to apply problem-solving strategies. At the end of each unit, the "Math in Action" activities provide students with opportunities to apply the various concepts learned throughout the unit along with problem-solving strategies to develop solutions to real-world issues.
- 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. The materials 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 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 4" asks students to use their knowledge of ratios to write an article comparing the number of sunrises that can be photographed from the international space station to the number of sunrises visible in the same amount of time from Earth. The materials support students in completing this task by providing a problem-solving checklist, and guidance on beginning their first paragraph. 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 4" includes the following note for teachers: "Make Sense of the Problem: Present the Writing an Article problem and use Three Reads to help students make sense of it. Have different volunteers take turns reading aloud each section of information. Remind students that the Earth makes one complete rotation around its axis in 24 hours..."
- Materials provide opportunities for students to think mathematically. For example, in "Lesson 23, Session 1," before beginning the "Model It" Section, teachers activate students' knowledge by asking, "What are positive and negative numbers?" and reminding them they know how to locate numbers on a number line. In "Model It" question 1, students use a number line to model a real-world situation of walking three blocks to the right and walking three blocks to the left. In "Model It" question 2, the vocabulary term *opposite numbers* is introduced as the problem asks, "Are numbers to the right of 0 on the number line less than 0 or greater than 0?" and "How are negative numbers similar to positive numbers?" Teachers then use the "Discuss It" question as an opportunity for students to think mathematically and make sense of the mathematics as they discuss the question, "How do you know that 1 and -1 are opposites?"
- The materials identify common misconceptions students may have and pre-plan teacher moves for students to make sense of mathematics. For example, in "Lesson 23, Session 1," a common misconception is that students may believe zero is a positive or negative number. Teachers can prompt students to examine the number line in the model for question 2. Students circle zero and highlight the space on the number line marked negative numbers in one color and the space marked positive numbers in a second color. Teachers facilitate discussion about zero being neither positive nor negative.

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

- Materials support students in understanding that there can be multiple ways to complete a task. For example, in "Lesson 24, Session 1," students can use algebra tiles, number lines, or

two-color counters to solve "Try It" question 1, which instructs students to list the golf plays from worst to best.

- Materials support students in justifying that there can be multiple ways to complete tasks. In "Lesson 24, Session 1," the *Teacher Guide* instructs teachers to select two to three samples that represent the range of student thinking in the classroom for a whole class discussion. An example of ordering the class discussion based on student samples includes comparing the relationship of the numbers using words describing each situation, ordering the numbers based on the value of the numeral, and plotting the values on a number line.
- The materials include questions that require students to consider multiple ways of representing mathematical concepts. For example, when finding the area of a composite figure in "Lesson 2, Session 3," students are asked to analyze one decomposition strategy and to create their own model showing an alternative strategy. Successful completion of this task requires students to analyze and evaluate multiple models that explain the same concept.
- The materials support students in explaining that multiple strategies can be used to solve problems. For example, the "Discuss It" question of "Lesson 8, Session 2" asks students to respond to the question, "How is your strategy similar to mine? How is it different?" with a partner.
- 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 4," 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 4" states that students' solutions should show an understanding of using double number lines or tables to solve ratio problems.
- 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 there are multiple ways to solve the problem or task. For example, in "Lesson 13, Session 4," 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 13, Session 4," "Model It" asks students to connect models they presented with the models presented in the materials and are then asked to justify how using a double number line and a table can be used to solve the problem they are working on.

**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 13, Session 4," students are asked to work with a partner to solve problems involving equivalent ratios 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 13, Session 1," students develop definitions for *ordered pair*, write about what they know about them, and create examples of how they can be represented using a graphic organizer. The "Connect It" Section of each lesson has 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 13, Session 4" "Discuss It" question asks students to discuss how their models show the ratio outlined in the current problem. 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 13, Session 4" provides teachers with guidance on facilitating a discussion to help students make sense of equivalent ratios.
- The materials provide opportunities for students to write about math with their peers. For example, the "Discuss It" question of "Lesson 8, Session 2" asks students to respond to the question, "How is your strategy similar to mine? How is it different?" with a partner.
- The materials provide opportunities for students to talk about math with their peers. For example, the "Differentiation: English Learners" Section of "Lesson 3" advises teachers to create a co-constructed word bank with students to support dialogue about the nets of three-dimensional shapes. The materials then provide a series of sentence frames for students to use in talking with a partner about the strategies they used to solve a problem involving the net of a three-dimensional shape.
- The materials integrate writing into the learning process to deepen student learning and understanding of mathematical concepts. For example, in "Lesson 1, Session 3," students respond to question 9 in their "Math Journal." Students draw two different parallelograms that each have an area of 12 square centimeters and label the base and height of each parallelogram. In addition, students use the "Interactive.

## Productive Struggle

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

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

Evidence includes, but is not limited to:

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

- The materials support teachers in 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. 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 16, 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 bag of dog food would last for a given period of time using the ratio provided within the problem. 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 13, Session 4" "Model It" Section, students connect the models they presented with the models presented in the materials. They are asked to justify how using a double number line and a table can be used to solve the problem they are working on.
- The materials encourage students to share their procedures and strategies. For example, the "Discuss It" question in "Lesson 8, Session 2" asks students to respond to the question, "How is your strategy similar to mine? How is it different?" with a partner.
- The materials encourage students to reflect on their procedures and strategies. For example, the "Facilitate Whole Class Discussion" Section of "Lesson 8, Session 4" directs teachers to

"Look for understanding that estimation can be used to check for a reasonable answer," and to ask, "How is estimating useful when checking for a reasonable answer?"

- Materials support teachers in guiding students to share their problem-solving approaches, including explanations. For example, in "Unit 2" "Lesson 7, Session 1," before students work on the "Try It" problem, the teacher uses the "Co-Craft Question" to help students make sense of the problem. If students need support in getting started, the teacher can lead a group discussion of the quantities in the problem. Then students turn and talk to compare their questions and revise before sharing the questions with the class. After students work on the "Try It" problem, students respond to "Discuss It" questions with their partner. The teacher selects two to three samples that represent the range of student thinking in the classroom for a whole classroom discussion on selected strategies.
- Materials support teachers in guiding students to reflect on their problem-solving approaches, including explanations and justifications. For example, in "Unit 2" "Lesson 7, Session 1," students respond to "Reflect" question 3. The problem asks, "How do you use place value when adding and subtracting decimals?" As students respond in their math journals, the teacher looks for an understanding that adding and subtracting multi-digit decimals requires that the digits be lined up by place value.

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

- 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 13, Session 3" provides teachers guidance for selecting student work samples to facilitate a class discussion, with one of the strategies being to address a misconception about addition of the same number to both quantities in the ratio as opposed to multiplication or division. Throughout each unit, the "Math Background" Section provides insights into each concept, along with detailed explanations of common misconceptions.
- The *Teacher Guide* includes "Common Misconception" notes throughout each lesson. For example, "Lesson 6, Session 1" provides the following guidance on preventing misconceptions related to factoring: "Listen for students who do not include 1 and the number itself as factors of the number. As students share their strategies, ask them to discuss how they made sure that they found all possible side lengths of the closets. Even though a pair of dimensions may not seem reasonable or likely to be used for the closets, it should still be listed as a possibility."

- Each lesson quiz includes an answer key that explains the misconceptions that could have caused a student to choose a specific incorrect answer.
- 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 state, "Listen for students who considered perimeter instead of area. They may say that Alec's kite uses more paper than Kenji's because it has a greater perimeter. As students share their strategies, have them describe how they counted the squares and how they accounted for the half squares."
- Materials offer guidance to assist teachers in providing explanatory feedback based on student responses. For example, in "Lesson 1, Session 2," an "Error Alert" Section advises teachers, "If students do not find the area of the composite shape after decomposing and rearranging it, then guide them to label each part with its area. Then have them find the total area by calculating the sum of the areas of the parts."