

# IMRA Review Cycle 2024 Report



Publisher Name	Program Name
Agile Mind, Inc.	Texas Mathematics
Subject	Grade Level
Mathematics	7

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

## IMRA Reviewers

**Flags for Suitability Noncompliance** 0

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

**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** 0

## 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** 1

# Quality Review Summary

Rubric Section	Quality Rating
<b>1. Intentional Instructional Design</b>	<b>53 / 53</b>
<b>2. Progress Monitoring</b>	<b>28 / 28</b>
<b>3. Supports for All Learners</b>	<b>32 / 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>66 / 66</b>
<b>6. Productive Struggle</b>	<b>25 / 25</b>

## Strengths

- 1.1 Course-Level Design: Materials include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course, with suggested pacing guides for various instructional calendars, explanations for the rationale of unit order and concept connections, guidance for unit and lesson internalization, and resources to support administrators and instructional coaches in implementing the materials as designed.
- 1.2 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.
- 2.1 Instructional Assessments: Materials include a variety of instructional assessments at the unit and lesson levels, including diagnostic, formative, and summative assessments with varied tasks and questions, along with definitions and purposes, teacher guidance for consistent administration, alignment to TEKS and objectives, and standards-aligned items at different levels of complexity.
- 2.2 Data Analysis and Progress Monitoring: Materials include instructional assessments and scoring information that provide guidance for interpreting and responding to student performance, offer guidance on using

tasks and activities to address student performance trends, and include tools for students to track their own progress and growth.

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

instructional assessments that require students to demonstrate depth of understanding aligned to the TEKS, with questions and tasks that progressively increase in rigor and complexity, leading to grade-level proficiency in mathematics standards.

- **4.2 Coherence of Key Concepts:** Materials demonstrate coherence across courses and grade bands through a logically sequenced scope and sequence, explicitly connecting patterns, big ideas, and relationships between mathematical concepts, linking content and language across grade levels, and connecting students' prior knowledge to new mathematical knowledge and skills.
- **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 explicitly state how the conceptual and procedural emphasis of the TEKS are addressed, include questions and tasks that use concrete models, pictorial representations, and abstract representations, and 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.
- 5.5 Process Standards Connections: Materials integrate process standards

appropriately, providing descriptions of how they are incorporated and connected throughout the course, within each unit, and in each lesson.

- 6.1 Student Self-Efficacy: Materials provide opportunities for students to think mathematically, persevere through problem-solving, and make sense of mathematics, while supporting them in understanding multiple ways to solve problems and requiring them to engage with math through doing, writing, and discussion.
- 6.2 Facilitating Productive Struggle: Materials support teachers in guiding students to share and reflect on their problem-solving approaches, offering prompts and guidance for providing explanatory feedback based on student responses and anticipated misconceptions.

## Challenges

- No challenges in this material

## Summary

Agile Mind *Texas Mathematics* is a grade 7 mathematics program that is aligned to the Texas Essential Knowledge and Skills (TEKS) and the English Language Proficiency Standards (ELPS). The materials provide a detailed scope and sequence, a year-at-a-glance with pacing guides for various instructional days, a lesson alignment guide connecting each lesson to the appropriate TEKS, and a corequisite support guide connecting to possible intervention lessons. Each topic includes detailed lessons and guidance for teachers and digital activities for students to discover the concepts and practice for students to apply their learning. Topic and lesson vocabulary are linked to the glossary; definitions in English and Spanish are provided, along with visual examples. Tasks are embedded within the lessons to extend and solidify student learning and understanding. Each topic concludes with a topic assessment, which includes a variety of interactive question types, such as multiple choice, drag and drop, and inline choice. The program includes professional support essays for teachers and instructional leaders to help teachers utilize the material to support all students. Additionally, the program includes a family support

website with videos to guide families in accessing the resources available to help students learn at home.

Campus and district instructional leaders should consider the following:

- The materials include resources for helping students learn how to track and monitor their growth through the use of Specific, Measurable, Achievable, Relevant, and Time-Bound (SMART) goals and whole-class review of most-missed questions for assessments.
- The product includes assessments designed for each topic, including sample formative and summative assessments and interim assessments covering various topics for each grade level. Teachers can use the questions provided in the product to create their own assessments.

## Intentional Instructional Design

1.1	Course-Level Design	15/15
1.1a	<a href="#">Materials include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course.</a>	5/5
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>	2/2
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 include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course. Materials include suggested pacing to support effective implementation of various instructional calendars. Materials include an explanation for the rationale of unit order as well as how concepts to be learned connect throughout the course. Materials include guidance and protocols for unit and lesson internalization. Materials include templates for unit and lesson internalization. Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.**

Evidence includes, but is not limited to:

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

- The materials in the "Professional Support" Sidebar navigation under the "Course Planning and Pacing" dropdown menu include a comprehensive grade 7 *Scope and Sequence Guide*, detailing the progression of math concepts and knowledge taught throughout the academic year and expanding on the topics learned in grade 6. The material states, "Mathematics 7 builds on grade 6 work by extending students' understanding of ratio to a more formal understanding of rate and its application with percents. Students move towards fluency with all four operations with rational numbers to include negative rational numbers. Students then continue the work they started in grade 6 in writing expressions and equations, laying the groundwork for their grade 8 work with functions."
- The guide divides the six units into topics, each including a description of the topic. Each topic also aligns the English Language Proficiency Standards (ELPS), corequisite Texas Essential Knowledge and Skills (TEKS), and indicates which TEKS are foundational for future work. The concepts and knowledge within the course structure are integrated. For example, it outlines how students will apply process standards to use geometry to describe or solve problems that involve proportional relationships. The material allows teachers to understand the required

concepts and knowledge present in the course. Under "Topic 1," the document outlines that the lessons will cover TEKS 7.3, 7.4, 7.5, and 7.7 and ELPS 1.A, 2.F, 3.D, 3.F, 3.H, 4.C, and 4.D.

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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 in the grade 7 *Scope and Sequence Guide* include suggested lesson pacing to support the effective implementation of the TEKS and course requirements. For example, the table states, "These course materials are designed to support 121–130 lessons (1 lesson equals 45 minutes)."
- The materials under the "Professional Support" Sidebar within the "Course Planning and Pacing" dropdown menu include a grade 7 year-at-a-glance document. The document outlines the sequence of instruction for three timelines with varying days of instruction: 122–131 days, 165 days, and 180 days, allowing flexibility in adjusting the time allocated to specific units.
- The pacing guides for each of the various days of instruction include suggested pacing for each unit and each topic within the unit. For example, in the pacing guide for 121–130 days of instruction, 44–49 days is suggested for "Unit 1," and 13–15 days is suggested for "Topic 1." The materials suggest pacing with the TEKS and ELPS.
- It also notes the readiness standards, corequisite, and foundational TEKS.

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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 *Texas Mathematics 7 Course Rationale* states, "The Texas Mathematics 7 course builds on previous understandings of ratio and rate to engage in a deep study of proportional relationships...as students explore the content described by the TEKS, they make connections to reinforce ratio and rate reasoning by analyzing and representing proportional and nonproportional situations. They also build on their understanding of linear equations from previous grades."
- The material explains the sequencing of lessons to establish foundational skills before advancing to more complex ones. For example, "The Texas Mathematics 7 course was designed to provide students with a deep foundation in proportional thinking early in the course as a tool to be applied throughout the year. Students apply proportional relationships to area and circumference of circles, probability, predictions, and comparisons using data."
- The "Prepare Instruction" Resource in each topic outlines what the topic will cover and how the lessons are connected. At the start of each topic, the materials explain how the new unit connects with the preceding and subsequent units. The material begins with "About this topic," which states for "Topic 1," "*Ratios and rates* is designed to build upon students' prior knowledge involving proportional reasoning...real-world applications engage students to explore and make reasonable conjectures while testing their predictions. Later in this course, students will continue to study proportional relationships using graphs and equations."



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

- The material in the "Professional Support" Sidebar includes "Getting Started," which contains the resource "Lesson Planning and Practice." This resource highlights strategies for teachers to internalize the lesson plan and unit plan. For example, it states, "Practice the planning and facilitation process for a block of instruction from a course that you teach." The material allows teachers to explore and master the content they will teach.
- Each unit is populated in the "Topic Content" Sidebar. The "Prepare Instruction" Resource in each unit includes guidance to help teachers internalize the materials for the whole topic, including language support and support for teaching special populations. For example, in "Language Support," "Topic 1" states, "Using pictorial and concrete representations to reinforce the meaning of new terms as you introduce them enhances mathematics vocabulary acquisition, both for English language learners (ELL) students and also for some students with learning differences. The use of mnemonic techniques can also help special populations of students who struggle with language acquisition and processing to learn and remember word meanings." The "Teaching Special Populations of Students" Section states specific strategies for teachers within the unit such as, "Instructional methods that move students gradually and deliberately from a concrete stage to a representational stage before moving to the abstract stage of symbolic representation—often referred to as the CRA teaching sequence—are particularly important for students with certain learning differences."
- Each topic is divided into individual lessons, including a description of the learning objectives and standards. The "Deliver Instruction" Tab under each lesson includes detailed teacher guidance, protocols, and suggestions on using the resources effectively, including text, embedded technology, enrichment activities, research-based instructional strategies, and supports to enhance student learning. For example, "Topic 1, Lesson 1" of the "Lesson Activities" Section directs teachers to show specific panels. It also includes specific questions for the teacher to ask students about the panels.

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

- The "Leadership Guide to Success" Resource included in the "Professional Support Overview" Tab provides a checklist, timeline, and key milestones for leaders for successful implementation. It also includes a classroom observation guide to rate a variety of implementation indicators with the teacher's level of use. The classroom observation guide includes four categories with indicators under each. The administrator and/or instructional coach can use the guide to offer feedback to the teacher. The "Structures for Successful Implementation: A Checklist for Leaders" Section states, "The following are some critical elements of a successful implementation. Use this chart to develop plans and monitor progress for each structure or strategy within your school or district." Administrators can utilize the checklist while observing a teacher's classroom to ensure the materials are being implemented as designed.
- The "Professional Support" Sidebar within the "Professional Support Overview" includes information about live lessons, stating, "In addition to the supports in our system, we offer



ongoing professional learning opportunities to teachers and leaders to assist you in making best use of our programs.” The description for coaches and instructional leaders states, “These sessions explore how education leaders can make the most of their implementation and equip leaders with tools and guidance to support their teachers.”

## 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.**

- At the start of each topic, the "Prepare Instruction" material offers a detailed overview that includes the essential content knowledge needed to teach the concepts in the unit effectively. "Grade 7, Topic 1" states, "Real-world applications engage students to explore and make reasonable conjectures while testing their predictions. Later in this course, students will continue to study proportional relationships using graphs and equations," providing insight for teachers about the concepts students will learn.
- The "Prepare Instruction" material includes prerequisite skills for the topic. For example, "Topic 4" lists multiplying fractions and multiplying decimals.
- On each topic's "Prepare Instruction" page, a "Language Supports" Section outlines the specific language and academic vocabulary necessary for teachers to use. It also provides reinforced vocabulary words and collateral vocabulary as needed. For example, "Topic 4" states, "All students should become proficient in using the core vocabulary of percent, interest, benchmark, discount, markup, percent error, tip, and compound interest." "Topic 3" notes that some non-native speakers may struggle with collateral vocabulary such as *representation*, *landscaper*, and *algebraic*.
- A "Vocabulary" Section exists in each "Topic Content" Sidebar, listing the vocabulary words used in the lesson. Each word is linked to the "Glossary," where a definition and a pictorial representation or example are provided. For example, in "Topic 7" when the word *event* is selected, the platform moves to its definition in the "Glossary" which states, "An event consists of a subset of the possible outcomes of an experiment. For the experiment of rolling a single number cube, the 6 possible outcomes are rolling a 1, 2, 3, 4, 5, or 6. An example of an event might be 'rolling an even number.' This event would include 3 of the 6 outcomes of the experiment: rolling a 2, 4, or a 6." The definition also provides a pictorial example of a number cube.

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

- The "Course Materials" Sidebar includes a "Support for Families" Tab. The link provided takes families to the *Support for Students and Families* website. The site includes instructional videos for using the online dashboard. The caption for the "Introduction for Students and Families" video states, "This brief video provides an introduction to programs and tools, and how these resources are used to support students' learning." It also provides a video instructing families how to access reports to track student progress. The caption states, "This brief video provides guidance for engaging with Assignments and Quizzes, and using their associated reports to monitor progress."
- The *Quick Start Guide for Texas Families* is available in both English and Spanish and contains support for families to use with the online materials. It states, "This guide will help you navigate key course components and resources available to you and your child...you and your child can access the online materials outside of class on any computer or tablet connected to the Internet." It provides directions for locating materials, such as, "Selecting a course directs you into Course Topics where you see the course syllabus." The guide provides step-by-step instructions for families on accessing and assisting with their student's progress.

## 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.**

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 *Scope and Sequence Guide* includes how objectives in the lesson are aligned to the Texas Essential Knowledge and Skills (TEKS) and the English Language Proficiency Standards (ELPS). In grade 7, for example, "Unit 9" lists TEKS 7.6 and ELPS 2.C, 2.F, 3.D, 3.E, 3.F, and 3.H as standards addressed in the lessons.
- In the "Deliver Instruction" Section, the materials include a comprehensive outline of instructional activities needed. The lesson plans include objectives, questions, and tasks that balance conceptual understanding, procedural skill fluency, and real-world application. For example, the objectives for "Unit 2, Lesson 1" state, "Use rates and proportional reasoning to solve real-world problems".
- Each lesson is given an overall time frame, and each piece of the lesson is given a time frame. Each lesson starts with "Opening and Framing Questions," such as this example in "Topic 1, Lesson 1," "What is a ratio? What are some examples of ratios you have seen before?" The "Lesson Activities" Section has teacher notes, support for English language learners (ELL) and other special populations, guiding questions, technology tips, classroom strategies, and/or differentiation applicable to the individual activity. For example, "Topic 2, Lesson 1" states, "Classroom strategy. This lesson contains many vocabulary words within the animations. Record these words and discuss them as they come up. Connect back to how these words

were used by the students in the opening discussion of the lesson. Add these words to your word wall and have ELL students add them to their vocabulary notebooks, and include translations as needed." Each lesson closes with "Further Questions." "Topic 2, Lesson 1" states, "What are some unit rates that you can use to describe our class or things in our classroom? For example, there are 25 students per teacher." There are "Suggested Assignments" for students in each lesson, such as "Student Activity Sheet," questions 6a–d and 7–10, and "Staying Sharp 1" in "Topic 2, Lesson 1."

- The assessments in the grade 7 materials under the "Test Designs" Section align with each lesson's content standards. For example, the "Topic 4–6 Sample Summative Assessment" states, "This assessment, created from interim assessment blueprint #2 in the Mathematics 7 course, can be used to assess students on the concepts and skills covered in Topics 4–6. This can be used as a summative assessment after instruction. The items on this assessment also align to the TEKS and can provide data on your students' performance against your state standards." A question from the assessment states, "Greg went out for breakfast and had pancakes for \$5.95, sausage for \$1.50, and orange juice for \$1.75. He would like to tip the waiter 15% of the total price. How much tip should Greg leave?" and includes answer choices.

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

- The *Scope and Sequence Guide* includes suggested lesson pacing to support effective implementation of TEKS and course requirements. For example, the materials state, "These course materials are designed to support 121–130 lessons (1 lesson equals 45 minutes)."
- Each lesson in the grade 7 materials has an overview with a suggested overall time frame and time frames for each piece of the lesson under "Deliver Instruction." For example, in "Topic 9, Lesson 1," five minutes are allotted for opening and framing questions, thirty-five minutes for lesson activities, and five minutes for further questions.

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

- The "Prepare Instruction" material for each unit links to topic files including the "Advice for Instruction" document, "Student Activity Sheets," tasks for students, and keys for teachers. This "Prepare Instruction" material lists additional resources for the unit and denotes which lessons to use them with. For example, in "Topic 2," calculators, chart paper, markers, 1:1 computers or tablets [Lessons 5 and 9], and the "Glossary" are listed as additional resources.
- The "Deliver Instruction" material begins each lesson with links to the lesson files teachers and students need. The same materials are located in the "Prepare Instruction" material at the beginning of the unit. For example, in "Topic 1, Lesson 1" the following files are provided: "Lesson 1 Student Activity Sheet," "Lesson 1 Student Activity Sheet Key," "Staying Sharp 1," and "Staying Sharp 1 Key."
- The "Deliver Instruction" material includes guidance for teachers to effectively deliver the lesson, including teacher tips, language strategies, support for ELL and other special populations, fluency notes, technology tips, and other methods and strategies as applicable

to the lesson. For example, in "Topic 7, Lesson 1," teachers are provided specific support for ELL and other special populations for pages 4–5 of the lesson. The material states, "This animation introduces many new vocabulary words. Provide time for all students to record the definitions on their activity sheets, and have ELL students record them in their vocabulary notebooks with pictures to explain the terms. Spanish speakers will recognize the term **experiment** from the cognate *experimento*. An anchor chart with a sample experiment like the number cubes would be helpful for all students to connect the terms to the concepts."

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

- In the "Deliver Instruction" Section under "Further Questions," the materials include questions for teachers to ask that provide students with opportunities to extend their learning. For example, "Topic 11, Lesson 2" includes the question, "Do all right prisms have rectangular faces? Why or why not? What must be true about the base of a right prism for the lateral faces to be congruent?"
- In the "Deliver Instruction" materials for each lesson, there are suggested assignments that are continuations of the lesson activities. For example, in "Topic 1, Lesson 3," the suggested assignments are the "Student Activity Sheet," questions 4, 5a–b, 6a–b, and 7a–b. Extension activities are included in some lessons. For example, in "Topic 11, Lesson 1" there is a link to the "Staying Sharp 1" worksheet to practice skills needed for upcoming lessons.
- In the "Course Materials" Sidebar under "Course Topics," the materials include the units for the course and a set of appendices that support foundational knowledge and skills from prior grades. In grade 7, for example, the appendices include *Key Learning from Earlier Grades*, *Solidifying Your Skills with Rational Numbers*, *Solidifying Your Skills with Equations*, *Introducing and Representing Ratios*, *Understanding and Representing Rates*, *Describing Data*, and *Geometric Measurement*. Each appendix includes an overview of the topic, lessons, topic summary, practice, assessment, activity sheets, and advice for instruction. In the *Solidify Your Skills with Equations* appendix, the digital learning platform features an educational online activity that includes interactive experiences to extend and enrich lesson or unit objectives. As it states in the overview, "In previous courses, you have explored variables, mathematical expressions, and equations. Play the animation to review these terms and investigate how they are related."

## Progress Monitoring

2.1	Instructional Assessments	24/24
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>	6/6
2.1e	<a href="#">Instructional assessments include standards-aligned items at varying levels of complexity.</a>	2/2

**The materials include a variety of instructional assessments at the unit and lesson level that vary in types of tasks and questions. The materials include the definition and intended purpose for the types of instructional assessments included. The materials include teacher guidance to ensure consistent and accurate administration of instructional assessments. The materials include diagnostic, formative, and summative assessments aligned to the TEKS and objectives of the course, unit, or lesson. The materials provide instructional assessments that include standards-aligned items at varying levels of complexity.**

Evidence includes, but is not limited to:

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

- In *Approach to Assessment*, the materials outline the different types of assessments included within the curriculum at the unit and lesson level. For example, it states that the material "includes many ways to utilize assessment as a critical tool to inform and drive instruction with classes of students on a daily, weekly, or longer basis. This guide defines, describes, and provides guidance for three main assessment types and the ways they are utilized within the courses and 'Assessment': diagnostic, formative, and summative."
- The "Items and Answers" material under *Assessment* includes varying assessment questions and tasks. The questions and tasks can be sorted by question type, depth of knowledge (DOK), and reading level. Questions can be pulled by topic or by Texas Essential Knowledge and Skills (TEKS). Each question has a standard and/or topic alignment across multiple grade levels as applicable. There are explanations for distractors if they are used in the answer choices. The question includes a solution with an explanation and how the answer was obtained. For example, in item 04108 for grade 7, the solution explains, "Students will need to determine the sum of the previous balance and the value of each transaction. For example, the value of the



transaction on 6/29/15 was  $-\$47.14$  and the previous balance was  $\$16.72$ , so the student will need to determine  $-47.14 + 16.72 = -30.42$ ."

- The "Test Designs" material under *Assessment* offers sample-created and teacher-created diagnostic and summative assessments. Teachers can access the alignment document for the assessment by clicking the three dots on the right side, next to the number of pages. The alignment document provides information on the topics addressed in the assessment and the TEKS, student expectations, and the number of questions. The alignment shows the question number, the percent of the score, item type, cognitive complexity, reading level, topics, and standards or TEKS. For example, "Mathematics 7 Topics 4-6 Sample Summative Assessment (course-based)" shows that the twenty-four items on the assessment are each worth 4% of the score, have a cognitive complexity of DOK 1, DOK 2 or DOK 3, are at a reading level ranging from 3.1 to 11, and are aligned to grade 7 TEKS.
- The materials include a variety of instructional assessments at the lesson level, with varying questions and tasks. For example, for grade 7 in "Topic 9, Lesson 3" there are examples of formative diagnostic assessments, such as, "Mathematical processes & practices. Before engaging with the animation, promote students' sense-making with questions such as: What do you notice about the cards pictured here? How might you use these cards to model the cereal box prize scenario? How many different ways could we use these cards to model the situation?" In "Topic 2, Lesson 2" there is a drag-and-drop formative assessment problem, with instructions to the teacher in the "Deliver Instruction" Section that state, "Use the puzzle as a formative assessment of students' understanding so far. [Student Activity Sheet (SAS), question 3]" The materials include topic assessments, such as "Topic 2, Lesson 9:" Topic Quiz which states "This lesson is intended for a topic-level assessment." The assessment includes questions in various formats including multiple-choice, drag-and-drop, fill-in-the-blank, multiple-selection, and text entry.

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

- In *Approach to Assessment*, the materials outline the different types of assessments included within the materials at the topic and lesson level. For example, it states, "The materials include many ways to utilize assessment as a critical tool to inform and drive instruction with classes of students on a daily, weekly, or longer basis. This guide defines, describes, and provides guidance for three main assessment types and the ways they are utilized within the courses and 'Assessment': diagnostic, formative, and summative."
- The *Approach to Assessment* materials outline the definitions and purposes of each assessment. For diagnostic assessment, it states, "Diagnostic assessments are short assessments of students' knowledge and skills, given prior to instruction. They are intended to provide evidence of students' strengths and potential knowledge gaps in skills required to understand upcoming content." For formative assessment, it states, "The purpose of formative assessment is to elicit evidence that helps students and teachers identify strengths, misconceptions, and errors, and monitor progress toward identified success criteria, all to move student learning forward through modifying instructional decisions and student solution

methods." For summative assessments, it states, "Summative assessments are a snapshot of retained learning and skills at the end of a period of time."

- Resources for "Getting Started," including practice and assessments, are in the "Professional Support" Sidebar. A National Council of Teachers of Mathematics (NCTM) research brief entitled *What Does Research Say the Benefits of Formative Assessments Are?* is included with the materials. The article explains, "Assessment for learning is any assessment for which the first priority in its design and practice is to serve the purpose of promoting pupils' learning." The article refers to three different types of formative assessments: short-cycle (within and between lessons), medium-cycle (within and between instructional units), and long-cycle (across quarters, semesters, or years). The article suggests that for formative assessments to benefit student learning, they need to consider three processes: establish where they are in their learning, where they are going, and how to get there. The teacher is the facilitator and provider of feedback. The peer and the learner activate students as instructional resources and owners of their learning.
- The *Approach to Assessment* material features a range of assessment tools designed to measure comprehension of mathematical concepts and skills, including interim assessments. The material states, "Users have access to long-cycle formative assessment in the form of interim assessment blueprints in the Professional Support area of each course. Content experts created each blueprint, which covers 2–4 topics of content and standards. These long-cycle formative assessments are meant to inform instruction and not to be evaluative."
- The *Approach to Assessment* material provides specific examples through screenshots of the assessments and their utilization within the materials so teachers have clear guidance. The material includes teacher considerations. For example, the material states, "These question prompts embedded in a lesson can be used by the teacher to promote student discourse and formatively assess understanding in the moment. They are supported by Check buttons that reveal a full response modeling correct usage of academic vocabulary and application of the lesson's learning objectives."

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

- In *Approach to Assessment*, the material outlines guidance to ensure consistent and accurate administration of the assessments. For example, it states, "This guide defines, describes, and provides guidance for three main assessment types and the ways they are utilized within the courses and 'Assessment': diagnostic, formative, and summative...teachers should standardize administration across their classes while being careful to ensure students are given the appropriate modifications and scaffolds, as needed." This provides standard and consistent guidance to teachers.
- The grade 7 "Deliver Instruction" Section of each lesson includes teacher guidance to ensure consistent and accurate administration of instructional assessments. For example, in "Topic 4, Lesson 8" there is guidance for the "MARS Task: 25% Sale." There are "Opening and Framing Questions," such as, "Which will result in a lower price 50% off or 20% off followed by 30%?" for the first five minutes of the 45-minute lesson. Students have thirty-five minutes to

complete the MARS Task. The lesson has the students clarify a definition, explain their thinking, and justify their answers. Students will work individually for some time, and then students will partner up. The lesson provides the teacher with three classroom strategies to use while students are working. For example, one classroom strategy states, "As students are working, monitor their progress. Encourage students to make sense of the problem by explaining to themselves or to you the meaning of the information given in the prompt. Notice how students represent this information. For example, some students may draw a pictorial or graphing representation, others may write ratios, etc. Consider which representations you would like to highlight during your debrief of the task." The "Deliver Instruction" material links to a rubric to accurately and consistently score the activity and provide feedback to students. The rubric explains, "The following scoring rubric was developed specifically for this task and can be used to evaluate your students' work."

- Within the "Professional Support" Sidebar is the "Essays on Content, Pedagogy, and Practice" Section. It includes additional links to the assessments within the course. The "MARS Task: 25% Sale" material includes examples of student work with an explanation of the grading practices, for example, "Patterns in the understandings and misunderstandings of students emerged from the scoring of a large number of tasks. Those patterns are discussed in this table, organized by the point value assigned to the students."
- For "Constructed Responses" tasks in grade 7, teachers are guided to direct students to show their understanding through constructed responses. For example, "Topic 7, Lesson 13 Constructed Response" states, "Bring in a paper bag with the tiles from Constructed Response 3 inside: 3 squares, 2 shaded triangles, 1 trapezoid, and 5 un-shaded triangles. Do not tell students what shapes are in the bag or how many there are of each. Have students take turns pulling out shapes and returning them, recording the results on the board. Do this at least 30 times. Ask: What shapes do you think are in the bag? Do you think there is a shape that is in the bag and has not been pulled out yet? Which shape do you think is represented the most?" This provides teachers an overview of how to ensure students are consistently experiencing the assessment.
- In the "Professional Support" Sidebar under "Getting Started," the "Practice and Assessment" material provides video clips outlining the framework for formative assessment from NCTM and how the material's comprehensive tools support assessment for learning. The videos include instructions on scheduling assignments, assignment reports, scheduling quizzes, and score and review tools in the materials.

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

- In the "Deliver Instruction" Section for each lesson, there are formative assessments aligned to the TEKS and objectives for the lesson. For example, "Topic 7, Lesson 1 Opening and Framing Questions" states, "Talk to students about their (and your) favorite game shows that involve an element of chance. Discuss the rules and the ways to win. Ask: What determines the chances of winning the game? (Provide specifics pertinent to the discussed game.) Is it likely that someone will win? Is it a game of skill, chance, or both? What would be your chances of winning if you went on the show?" The questions align with the goals and

objectives of the lesson, which state, "Find the probability of a simple event. Make predictions based on results from experiments or theoretical probabilities." Teachers use this diagnostic and formative assessment to gauge student understanding.

- In grade 7, there is a summative assessment of the TEKS and objectives for each unit. Students can access a summative assessment aligned to the TEKS from that topic's lessons. For example, "Topic 7, Lesson 14" includes the instructions, "This lesson is intended for a topic-level assessment." The following page provides the assessment to students with questions that align to the goals and objectives stated in the "Prepare Instruction" material for the topic. For example, the third question of the assessment asks, "Which section has the least chance, theoretically, of being the hiding place?" It also provides a visual to use for answering the question. This aligns to the topic objective, "approximate the probability of events."
- The *Assessment* material includes "Items and Answers," which offers varying assessment questions and tasks. The questions and tasks can be sorted by question type, DOK, and reading level. Questions can also be filtered by topic or TEKS. Each question also has a standards and/or topic alignment across multiple grade levels as applicable. For example, in grade 7, when selecting items by topic, teachers choose the topic from the course materials in the appropriate grade level. Then, questions are presented that align with the TEKS addressed in the topic. For example, selecting "Topic 2" populates fifty-two questions that correspond with standards addressed within the topic. By selecting to find items by standard, teachers can use the TEKS standard set, grade level, and TEKS items to be included in the populated questions. The items then show the standard and topic alignments for the problem. For example, grade 7 item 03564 aligns with TEKS 7.03A and "Topic 5" of the materials.
- The *Assessment* material includes "Test Designs" which offers sample and teacher-created diagnostic and summative assessments. By selecting one assessment, the TEKS addressed are listed along with the number of questions aligned to the topics of the course and TEKS. For example, "Mathematics 7 Topic 4–6 Sample Summative Assessment (course-based)" lists six questions addressed in "Topic 4" with TEKS 7.04D; nine questions addressed in "Topic 5" with TEKS 7.02, 7.03, and 7.04; and nine questions addressed in "Topic 6" with TEKS 7.07, 7.10, and 7.11.
- The "Professional Support" Sidebar includes "Interim Assessments." For example, the grade 7 material "Interim Assessment 1" blueprint demonstrates alignment with the grade standards. The material states, "Use the blueprint to create a course-based test design in *Assessment* aligned to Topics 1–3." The material includes a table organized by topic that lists the item identification number (item ID), item type, cognitive complexity, reading level, and standards-aligned to the TEKS.

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

- The *Assessment* material "Items and Answers" offers a variety of assessment questions that can be sorted by question type, DOK, and reading level. The DOK levels available for sorting encompass four tiers. The items bank includes technology-enhanced items such as inline choice, hot spot, and multi-select, providing instructional assessments that incorporate standards-aligned items across different levels of complexity. For example, in grade 7, by

selecting TEKS 7.07 twenty-eight questions populate and range from DOK 1 to DOK 3. The items include multiple choice, drag-and-drop, multiple selection, and fill-in-the-blank item types.

- The *Assessment* material "Test Designs" offers sample-created and teacher-created diagnostic and summative assessments. Teachers can access the alignment document for the assessment by clicking the three dots on the right side, next to the number of pages. The alignment document provides information on the topics addressed in the assessment and the TEKS, student expectations, and the number of questions. The table within the alignment shows the question number, the percent of the score, item type, cognitive complexity (DOK), reading levels, topics, and TEKS for each problem in the assessment. For example, in "Mathematics 7 Topics 4–6 Sample Summative Assessment (course-based)," page 1 refers to the first problem of the assessment and includes Item ID 03112, explains that the problem represents 4% of the score, is a multiple selection item at a DOK 1 and reading level 6.1, and is addressed in Topic 4 with TEKS 7.04.D.
- Within the topic lessons, various assessments provide different levels of complex questions. For example, "Topic 5, Lesson 10" provides students an opportunity to engage in standards-aligned items for instructional assessments at varying levels of complexity. For example, "Constructed Response 2" says, "Your class is planning a day trip to a state park. Each of the 30 students can choose to go rock climbing, biking, or canoeing. Before you leave, you have to figure out how many students will choose each activity and how much money the class will need for the trip." It provides teachers guidance for having "students work individually on this assessment for 15 minutes, then pair up to compare answers and strategies...have a whole-class discussion about the results."

## 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

**Instructional assessments include standards-aligned items at varying levels of complexity. 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 "Professional Support" Sidebar includes the "Professional Learning" Section with the material "Practice and Assessments". The "Practice and Assessments" learning resource includes guidance for teachers on interpreting and responding to student performance. In the video resource "Reports and Score and Review," the facilitator shares how to interpret the results of student performance and address the data by explaining how to see what questions a student answers correctly or incorrectly, how many attempts the student took on each question, and how to read the overall average by question for the class. After the assessment, teachers can run a report to see the answers students selected for each question.
- The "Professional Support" Sidebar includes "Interim Assessments." Each assessment contains a blueprint that helps the teacher understand each question's aligned standards, outlining the specific skills for each assessment question. "Interim Assessment 1" states, "This blueprint was developed...to help teachers assess their students' progress toward mastery of the content addressed in the topics listed." The blueprint includes each problem's item ID, item type, cognitive complexity, reading level, standards, and course topic.
- *Approach to Assessment* includes information on how to read a "Standards Results" report. For example, it states, "Figure 10. This is an example of a Standards Results report in Assessment. This report can be used to determine performance by standard and connect students' strengths and weaknesses to opportunities to reinforce knowledge and skills in upcoming lessons." The guide includes screenshots from the teacher dashboard. It provides definitions for the types of instructional assessments and when they should be utilized. The material includes teacher considerations. For example, "Teachers utilize the identified strengths to connect to the content of the topic and plan for corequisite support for identified



gaps." The guide shows how to organize data by standards or topics to help teachers interpret student performance. The material explains when and how teachers should use formative assessments to guide instruction. It states, "Short and medium-cycle formative assessments are intended to assess students' progress against relevant standards and to make informed instructional decisions while the learning is still occurring, when adjustments can make the most difference." For long-cycle formative assessments the material explains, "Teachers and students can identify strengths to utilize in upcoming topics and make a plan for repair where it makes sense." For diagnostic assessments, the material states, "Teachers utilize the identified strengths to connect to the content of the topic and plan for corequisite support for identified gaps."

- The *TX Mathematics 7 Corequisite Support Guide* offers direction on understanding and addressing student performance within an individual lesson. It states, "Teachers should use formative assessments to decide whether or not students need the additional corequisite support. Some ideas for formative assessments are given in the guidance below." For example, "Topic 11, Lesson 8" states, "Before starting Topic 11, consider using the suggested page from the appendix topic. These pages teach a conceptual understanding of the volume of rectangular prisms and can help students transition to the examples in Topic 11."

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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 *Approach to Assessment* material states, "Short and medium-cycle formative assessments are intended to assess students' progress against relevant standards and to make informed instructional decisions while the learning is still occurring when adjustments can make the most difference," for long-cycle formative assessments "teachers and students can identify strengths to utilize in upcoming topics and make a plan for repair where it makes sense," and for diagnostic assessments "teachers utilize the identified strengths to connect to the content of the topic and plan for corequisite support for identified gaps." For example, the material suggests for the teacher to "use the results of the standards-based diagnostic assessment to identify corequisite support needs" and "have students fill out a process paper during the assessment to provide additional evidence to identify strengths and inform needed support."
- In the *TX Mathematics 7 Corequisite Support Guide*, the materials provide guidance and activities for teachers to respond to trends in data. For example, it states, "Teachers should use formative assessments to decide whether or not students need the additional corequisite support." The guide includes formative assessments, instruction, and practice for eight different topics throughout the materials. For example, in "Topic 1, Lesson 1," the guide explains, "Use other pages from Lessons 1 and 2 as needed to support students' understanding of ratios. If you find students need the additional support from Lessons 7 and 8, you may add an additional day to this topic." The guide includes what tasks to implement based on assessment data, such as "Appendix: Introducing and Representing Ratios" and "Lesson 8 Practice" for "Topic 1, Lesson 1."
- In the lessons for each unit, the "Deliver Instruction" and "Lesson Activities" Sections include guidance for each lesson's activities and assessments. For example, in "Topic 7, Lesson 9,"



"Classroom Strategy" states, "As students are working, monitor their progress. Encourage students to make sense of the problem by explaining to themselves or to you the meaning of the two questions. Observe how students are modeling with mathematics. For example, some students may model the situation with actual counters or game pieces, others may create a table, diagram or other model. Think about which models you want to highlight during your debrief of the task." The materials include guidance on utilizing provided tasks and activities to address trends in student performance on assessments.

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

- In the "Classroom Routines" material under "Assessment Processing Routine," students can reflect on their progress and growth on assessments. For example, it states, "The following process will help you identify the mathematical ideas and skills your learning community understands well and can use effectively. It will also identify those ideas and skills that require additional attention." This processing time allows students to understand their current performance and how they can use their learned knowledge in the future.
- In the "Classroom Routines" material under "SMART Goals," students learn about SMART goals. It states, "Remember that setting specific goals is a strategy that can help you gain motivation and keep it. And your goals aren't set in stone. You can monitor and adjust them when you think it would be effective." The material gives an overview of goal setting, stating, "Play the animation to review the qualities of an effective goal." The animation explains the components of a SMART goal and has students practice identifying and setting their own goals.
- The materials include tools for students to monitor their progress at home. The "Support for Students and Families" Website includes a brief video that "provides guidance for engaging with Assignments and Quizzes, and using their associated reports to monitor progress." The "Quick Start Guide for Families" includes instructions and screenshots for students and parents to access reports that "provide time spent and performance on assignments, quizzes, and tests" the teacher has created.

## 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

**Materials include teacher guidance for differentiated instruction, activities, and/or paired lessons for students who have not yet reached proficiency on grade-level content and skills. Materials include pre-teaching or embedded supports for unfamiliar vocabulary and references in text. 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 "Professional Support" sidebar includes "Essays on Content, Pedagogy, and Practice." The "Differentiated Instruction for Student Success" essay includes specific guidance for teaching students who have not yet reached proficiency on grade-level content. Differentiation can occur through the content, the process through which students learn the content, the products students use to demonstrate their learning of the content, and the learning environment. For example, it states, "The 'Deliver Instruction' provides guidance on the use of a variety of instructional strategies for processing the content." This guidance outlines activity supports within and beyond the lesson for differentiation, such as using manipulatives, visuals, and turn-and-talks with a partner.
- The "Differentiated Instruction for Student Success" essay states, "Another way to differentiate by depth is through corequisite supports for grade-level content." The grade 7 *Corequisite Support Guide* includes supports to provide "'just-in-time' instruction to accelerate necessary learning from prior grades." The materials include corequisite supports for eight topics. The supports include suggestions for formative assessment, instruction with appendix lessons, and practice. For example, for students struggling with "Topic 10, Lesson 4," the guide provides locations within the "Appendix: Geometric Measurement" topic for additional practice with area of parallelograms and triangles to solidify corequisite skills needed to find composite area. The material states, "Before teaching Lesson 4, consider using the suggested appendix topic to review area. You can assign additional Practice from the appendix topic."

- The "Course Materials" sidebar includes differentiated activities for students in the "Course Topics" appendices. The appendices include "Key Learning from Earlier Grades," "Solidifying Your Skills with Rational Numbers," "Solidifying Your Skills with Equations," "Introducing and Representing Ratios," "Understanding and Representing Rates," "Describing Data," and "Geometric Measurement." The "Key Learning from Earlier Grades" appendix states, "The following topics can be used for differentiated practice and review of key skills taught in earlier grades." The appendix focuses on strengthening skills in operations with rational numbers and solving equations. The "Prepare for Instruction" page includes differentiated student activity sheets and suggested assignments and assessments for teachers to assign based on students' needs.
- The material includes differentiation strategies within lessons to support teachers with their instruction. For example, "Topic 12, Lesson 2" states, "Have students work in small groups to answer the questions. Use the Check button as needed to verify student answers or promote discussion." This guidance helps teachers support students whose skills are on grade level.

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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 "Professional Support" sidebar includes "Essays on Content, Pedagogy, and Practice." The "Teaching English Language Learners" essay outlines specific strategies to support English learners (EL) with unfamiliar vocabulary words and pre-teaching supports. For example, it states that teachers should clearly define the vocabulary within the context of learning and use connections and visual representations. This guidance provides explicit strategies for vocabulary acquisition, understanding, and fostering discourse, including using vocabulary notebooks, echo-repeat and choral chants, word walls, concept maps, anchor charts, sentence frames or stems, and adapted activities. It suggests teachers use multiple representations, real-world scenarios, visualizations, and animations to bridge from vocabulary acquisition to conceptual understanding. The material states, "Language notes available within the lessons provide opportunities to point out connections between words."
- In the "Glossary," the Spanish/English vocabulary words provide the opportunity for academic language learning, for both students and teachers. This resource can be utilized while students learn academic vocabulary. When the Spanish glossary is selected, the material provides the word and its definition in English and Spanish. For example, the entry for the vocabulary word *absolute maximum* states, "The absolute maximum is the largest value the function achieves on its domain. The value  $M$  is the absolute maximum of a function  $f$  if  $f(M) \geq f(x)$  for all  $x$  in the domain of  $f$ . An absolute maximum is also referred to as a global maximum." The entry includes a graph and problem, explicitly referencing the vocabulary in context.
- The "Prepare Instruction" materials for each topic include pre-teaching and embedded supports for unfamiliar key vocabulary terms within the context of new learning. For example, in "Topic 9," "Language Support" provides the core vocabulary for the topic and states, "The activities in this topic provide opportunities for students to talk with each other as they practice the mathematical vocabulary that is central to the concepts."

- The materials provide the lesson plan for the teacher in the "Deliver Instruction" Section. As part of the lesson activities, the materials include teacher tips, technology tips, notes for differentiation, and language strategies and support for EL and other special populations. For example, the "Topic 7, Lesson 1" "Support for ELL/other special populations" strategy states, "Provide time for all students to record the definitions on their activity sheets, and have ELL students record them in their vocabulary notebooks with pictures to explain the terms." It then suggests using an anchor chart to visually represent the differences in the terms and definitions for the class.
- Within the "Lesson Activities" animations, the materials include visuals and language notes to support student acquisition and understanding of vocabulary. For example, the animation in "Topic 10, Lesson 1" displays tables that sort shapes as "polygons" and "not polygons" and explains the definition. Students are asked to think about places where they have seen polygons in the real world.

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

- The "Professional Support" sidebar includes "Essays on Content, Pedagogy, and Practice." The "Differentiated Instruction for Student Success" essay outlines specific guidance for students who demonstrate proficiency in grade-level content and skills. For example, it states, "Teachers should also differentiate by depth for students ready for more sophisticated content....This type of exploration allows students to deepen their mathematical understanding while remaining in the same domain as classmates." This guidance outlines opportunities for students to engage in activities that deepen their thinking on grade-level content and skills. The material includes teacher guidance on various strategies to deliver content. The lessons integrate these supports to facilitate differentiation, including diagrams, worked examples, learning centers, and questioning strategies.
- The grade 7 materials include enrichment and extension activities throughout the lessons. The "Deliver Instruction" Section for each lesson provides teachers guidance on extension activities for students who have shown proficiency in grade-level content and skills. For example, "Topic 1, Lesson 5" states, "Use the two solution strategies on the animation as needed to extend students' thinking and verify their solutions." In "Topic 7, Lesson 6," students complete the "MARS task: Counters." Teachers use the provided rubric when scoring the task. The rubric states the activity is "designed to stretch students' thinking and to provide them with an opportunity to connect their learning to new concepts."

## 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

**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 and include guidance for teachers and recommended structures to support effective implementation.**

Evidence includes, but is not limited to:

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

- The "Professional Support" sidebar includes "Essays on Content, Pedagogy, and Practice." The "Problem Solving and Practice" essay states, "Questioning strategies embedded in lessons and in teacher advice prompt effective mathematical discourse, where students think critically, construct arguments, and justify their thinking."
- The grade 7 materials include guidance to support the teacher in modeling, explaining, and communicating the concepts students will learn. The "Prepare Instruction" materials for each topic include the "Advice for Instruction" material, which provides guidance on implementing each lesson activity for the entire topic by including the topic lessons and the student resources needed for each. For example, "Topic 12" explains that "Staying Sharp 1," "Practice page 2," and the "Deliver Instruction" Section will be used for "Lesson 1."
- The "Deliver Instruction" materials provide guidance and prompts to support teachers in communicating, explaining, and modeling the concepts to be learned directly and explicitly for the lesson. The material provides the teacher with a lesson plan for the 45-minute lesson. The beginning of the plan lists the goals and objectives for the lesson. For example, the goals and objectives in "Topic 10, Lesson 5" include, "Determine areas of composite figures." The lesson provides the teacher with "Opening and Framing Questions" to engage the students in the lesson. For example, in "Topic 12, Lesson 2," the opening states, "Ask students to think about their family expenses each month. Have them make a list of what they think their family spends money on each week." The material prompts the teacher to have students first work independently, then in groups of four, and then as a class to answer questions about their lists.

- In the "Deliver Instruction" Section, the "Lesson Activities" Section is organized by the pages of the digital resources and includes guidance associated with each digital lesson. Each page of the lesson activity provides guidance for teachers and students, including questions for the teacher to ask the students. For example, the guidance in "Topic 12, Lesson 2" states, "Facilitate a discussion about creating budgets. Ask students to talk with a partner about what a family budget is and why it might be important. Ask for some students to share their discussion." The materials outline key concepts that should emerge related to the concepts for instruction. The materials include teacher tips, technology tips, language support, and support for English learners or other special populations. For example, in "Topic 5, Lesson 5," the "Language Strategy" states, "This is a great opportunity to informally assess the students' problem-solving skills...comfortable with the conceptual understanding of the terms in each of the puzzles. Encourage them to read and apply the key vocabulary associated with the scenario by directing them to practice incorporating the language associated with the activities into their discussions."

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

- The "Professional Support" sidebar includes "Essays on Content, Pedagogy, and Practice." The "Problem Solving and Practice" essay states, "Questioning strategies embedded in lessons and in teacher advice prompt effective mathematical discourse, where students think critically, construct arguments, and justify their thinking."
- The grade 7 materials include guidance to support the teacher in modeling, explaining, and communicating the concepts students will learn. The "Prepare Instruction" materials for each topic include the "Advice for Instruction" material, which provides guidance on implementing each lesson activity for the entire topic by including the topic lessons and the student resources needed for each. For example, "Topic 12" explains that "Staying Sharp 1," "Practice page 2," and the "Deliver Instruction" Section will be used for "Lesson 1."
- The "Deliver Instruction" materials provide guidance and prompts to support teachers in communicating, explaining, and modeling the concepts to be learned directly and explicitly for the lesson. The material provides the teacher with a lesson plan for the 45-minute lesson. The beginning of the plan lists the goals and objectives for the lesson. For example, the goals and objectives in "Topic 10, Lesson 5" include, "Determine areas of composite figures." The lesson provides the teacher with "Opening and Framing Questions" to engage the students in the lesson. For example, in "Topic 12, Lesson 2," the opening states, "Ask students to think about their family expenses each month. Have them make a list of what they think their family spends money on each week." The material prompts the teacher to have students first work independently, then in groups of four, and then as a class to answer questions about their lists.
- In the "Deliver Instruction" Section, the "Lesson Activities" Section is organized by the pages of the digital resources and includes guidance associated with each digital lesson. Each page of the lesson activity provides guidance for teachers and students, including questions for the teacher to ask the students. For example, the guidance in "Topic 12, Lesson 2" states, "Facilitate a discussion about creating budgets. Ask students to talk with a partner about what



a family budget is and why it might be important. Ask for some students to share their discussion." The materials outline key concepts that should emerge related to the concepts for instruction. The materials include teacher tips, technology tips, language support, and support for English learners or other special populations. For example, in "Topic 5, Lesson 5," the "Language Strategy" states, "This is a great opportunity to informally assess the students' problem-solving skills...comfortable with the conceptual understanding of the terms in each of the puzzles. Encourage them to read and apply the key vocabulary associated with the scenario by directing them to practice incorporating the language associated with the activities into their discussions."

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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 "Problem Solving and Practice" essay states, "In class, students apply math to real-world contexts, develop conjectures, and justify their reasoning through lesson activities supported online and in print." The materials include guidance on exploring and applying concepts through animations, simulations, and puzzles. For example, the "Deliver Instruction" Section for "Topic 11, Lesson 2" includes teacher guidance about the animation, noting, "Before playing the animation, discuss with students...Have students fill in the table on the activity sheet... Then play the panel to check their work."
- The materials include multiple types of practice, such as whole group instruction, collaborative activities, and independent practice, and include teacher guidance on structures provided to support implementation. For example, the "Deliver Instruction" Section in "Topic 10, Lesson 3" includes teacher guidance for a whole group activity, which states, "Work through the problems together....Student answers will vary, so when discussing the results, ask students to explain their thinking." In "Topic 7, Lesson 1," the materials include guidance and recommended structures for small group practice, stating, "Have students discuss in groups where to place the markers. Let groups come up and place their markers and play the game. If time allows, let students conduct trials at their desks using number cubes."
- The materials provide practice items that allow students to apply what they learned in new and familiar contexts. "Topic 3, Lesson " states, "This page introduces a new scenario that represents a non-proportional relationship....Allow time for students to think individually or in pairs before sharing ideas as a whole class." This guides teachers on the recommended structures and types of student practice.
- The materials include daily homework and practice, assessment reviews, next-generation item types, hints and feedback, tools for differentiation, automatic grading, and real-time reporting throughout the lessons and activities. In "Topic 12, Lesson 2," the materials outline multiple types of practice. For example, "Have students work in small groups to answer the questions. Use the Check button as needed to verify student answers or promote discussion". This outlines the variety of approaches that can be used within the lesson, allowing students to check their own work as a form of feedback.



## Supports for All Learners

3.3	Supports for Emergent Bilingual Students	11/11
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>	2/2
3.3b	<a href="#">Materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs.</a>	1/1
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

**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. Materials 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. Materials include resources that outline opportunities to address metalinguistic transfer from English to the partner language.**

Evidence includes, but is not limited to:

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

- The "Teaching English Language Learners" essay provides strategies and explains the material's design elements that support English learners (EL). The essay includes recommendations and suggestions for building academic vocabulary with explicit strategies for vocabulary acquisition, including vocabulary notebooks and word walls. The essay explains how teachers can assist students as they bridge vocabulary acquisition to conceptual understanding by "using multiple representations of relationships—graphical, tabular, concrete, and algebraic—helps students develop deeper understanding." The essay includes insight into fostering student discourse, using formative assessments, and supporting other special learners. Each topic within the essay includes explicit strategies, such as think-write-pair-share, learning goals, exit tickets, and principles from Universal Design for Learning.

- In the "Glossary," the Spanish/English vocabulary words provide the opportunity for academic language learning. This resource can be used for students with varying levels of language. For example, the definition for *absolute value* states, first in English, "The absolute value of a real number is the distance between 0 and the number on a number line. As shown on the number line in the image, the absolute value of 3 is 3. This is written  $3 = 3$ . The absolute value of -3 is also 3:  $-3 = 3$ ." Below the definition, the term includes an example of how it is represented on a number line. When Spanish is selected from the sidebar, the term and definition are provided below the visual in Spanish. This is an explicit support for students across all levels of languages, given it includes visuals.
- The grade 7 materials include teacher guidance on providing linguistic accommodations for various levels of language proficiency designed to engage students in using increasingly more academic language throughout each topic. For example, in the "Prepare Instruction" Section for "Topic 7," the "Language Support" lists the core vocabulary and suggests using word walls and visuals in vocabulary notebooks. This guidance includes teacher instructions for various levels of language.
- The "Deliver Instruction" material for each lesson includes the "Lesson Activities" Section, which provides guidance for teachers during each activity. Within the guidance, "Support for ELL/Other Special Populations" suggests strategies discussed in the essay, "Teaching English Language Learners." For example, in "Topic 1, Lesson 2," the prompts for teachers suggest adding words to the word wall and having EL students sketch visuals with labels to match the definitions in their vocabulary notebooks. "Topic 7, Lesson 6" includes language suggestions for pairing students, such as, "Beginning English speakers may benefit from being paired together at first...Then they could be repaired or put in a group of 4 with native English speakers to help with communicating their thinking." The material offers teachers guidance on using strategies to help students engage with academic language over time.

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

- The *Mathematics 7 Scope and Sequence, 2024-2025* material integrates the English Language Proficiency Standards (ELPS) into the course structure. For example, "Topic 1" notes that "ELPS: 1.A, 2.F, 3.D, 3.F, 3.H, 4.C, 4.D" will be covered. The resource can be used to identify the ELPS integrated into the mathematics content.
- The materials include the "Teaching English Language Learners" essay that "provides specific high-yield teaching strategies and highlights key design elements of the material's system that can be used to support rich learning by ELL students." This material includes suggestions for building academic vocabulary and provides multiple strategies to promote student discourse. For example, it states, "Giving ELL students more ways to experience the language and make connections increases their ability to create and retain meaning (Sousa, 2011)." It also states, "When spoken and written language is supported with explicit strategies, visualizations, and interactions, ELL students will acquire and be successful with English and mathematics together." This resource outlines the criteria for teachers to implement the materials aligned to language acquisition by providing screenshots and suggestions on reading and interpreting the teacher's guidance for each lesson.

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**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 "Teaching English Language Learners" essay provides strategies and explains the material's design elements to support English Language Learners (EL). This material includes suggestions for building academic vocabulary and multiple explicit strategies to promote student oral and written discourse, including think-aloud and echo-repeat or choral chant for vocabulary acquisition. For example, echo-repeat and choral chant allow students to hear and repeat the words. To build conceptual understanding, the essay includes directions for total physical response, stating, "Students use movement in concert with words to describe a concept or term....For example, acute, right, and obtuse angles can be taught using arm movements to signal the angle measures (Asher, 2009)." The essay includes insight into fostering student discourse through teachers creating opportunities for students "to speak and write about the subject matter in meaningful ways." The guiding questions throughout the material prompt teachers to offer opportunities for students to build conceptual understanding. The material includes explanations of the explicit strategies of think-write-pair-share; sentence frames or stems; adapted activities; talk, read, talk, write; and Kagan structures for fostering discourse.
- The grade 7 materials include embedded guidance for teachers to support emergent bilingual students in making connections and developing academic vocabulary through oral discourse. For example, in the "Prepare Instruction" materials for "Topic 9," "Language Support," the core vocabulary is listed and explained along with opportunities throughout the topic, including activities for students to talk together and practice using the vocabulary.
- The "Deliver Instruction" materials include guidance for teachers on how to support emergent bilingual students in developing their vocabulary to increase their comprehension and background knowledge. For example, "Topic 1, Lesson 2" includes "Support for ELL/Other Special Population" suggestions such as, "Remember, it is more effective to build your word wall as you interact with words in the course as opposed to putting all the words up at the beginning of the topic," and suggests having EL students update their vocabulary journals with the terms, translations, and visual representations. This guidance allows teachers to support students in making connections through oral and written discourse as they interact with new academic vocabulary. In "Topic 6, Lesson 5," the material provides teachers with guidance encouraging students to engage more deeply with academic language over time through oral discourse. For example, the material states, "Pair students to come up with scenarios. Consider pairing students who speak the same native language together and letting them create scenarios in their own language." In "Topic 7, Lesson 2," teachers are provided with the following language strategy: "When discussing the framing question, be sure to discuss the difference between trial when used as a legal term, and when used in a math context."

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

- In the "Glossary," the Spanish/ English vocabulary words provide an opportunity for language immersion. Students with varying levels of language can use this resource. For example, the definition for *coordinate pair* states, "A coordinate pair is an ordered pair of numbers that names the location of a point in the coordinate plane. A coordinate pair has an x-value and a y-value. In this example, the ordered pair is (5,3). The x-value is 5 and the y-value is 3." Beneath the definition is a visual representation of the example, and the term and definition in Spanish. This resource is an opportunity to address metalinguistic transfer from English to the partner language.
- The "Teaching English Language Learners" essay provides strategies and explains the material's design elements to support EL students. The essay includes recommendations and suggestions for building academic vocabulary with explicit strategies for vocabulary acquisition, including vocabulary notebooks and word walls. The essay explains how teachers can assist students as they bridge vocabulary acquisition to conceptual understanding by using multiple representations to develop deeper understanding. The essay includes insight into fostering student discourse, using formative assessments, and supporting other special learners. Each topic within the essay includes explicit strategies, such as think-write-pair-share, learning goals, exit tickets, and principles from Universal Design for Learning. The material includes suggestions to address the transfer of metalinguistic skills from English to the partner language by pairing EL students with native English speakers.
- The "Deliver Instruction" materials include teacher guidance in "Support for ELL/Other Special Populations" suggestions that outline opportunities to address the transfer of metalinguistic skills from English to the partner language. For example, in "Topic 7, Lesson 6" the material suggests, "Beginning English speakers may benefit from being paired together at first until they have the mathematics worked out. Then they could be repaired or put in a group of 4 with native English speakers to help with communicating their thinking."

## 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

**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.**

- Throughout a topic, students are required to demonstrate a depth of understanding aligned to the Texas Essential Knowledge and Skills (TEKS). For example, topics include an end-of-topic quiz, which provides students the opportunity to demonstrate an understanding of the TEKS covered throughout the topic. For example, in the grade 7 materials, "Topic 2, Lesson 9" contains a quiz that includes a variety of question types, such as multiple choice, drag-and-drop, fill-in-the-blank, multiple selection, and text entry. *Mathematics 7 Lesson Alignments for Texas* specifies the problems in this quiz align with TEKS 7.04.A, 7.04.B, 7.04.C, 7.04.D, and 7.05.C. This provides students an opportunity to show comprehension and mastery of the content that corresponds to the TEKS standards.
- In the grade 7 course, the "Prepare Instruction" materials for each topic include a "Topic at a Glance" table listing all of the lessons within the topic. The "Topic at a Glance" table briefly describes the lesson and practice opportunities. For example, in "Topic 1," "Lessons 1–12" include a "Student Activity Sheet (SAS)" which incorporates open-ended questions for students to answer. The questions include a variety of depth, such as computation, multiple methods of solving, and application of the skills in real-world scenarios. The lessons include "Staying Sharp" activities, "Constructed Response" tasks, "MARS" tasks, and additional practice assignments for students to complete. The *Mathematics 7 Lesson Alignments for Texas* material shows the "Topic 1" lessons address TEKS 7.04.D, 7.05.A, and 7.05.C.
- The grade 7 materials include a variety of practice opportunities throughout the lessons, including instructional examples and assignments so students can demonstrate their individualized understanding of the TEKS at different depths of complexity. "Topic 1, Lesson 5," includes animation slides that provide learning, exploration, and application opportunities of ratios as addressed in TEKS 7.04.D. The activity moves from a one-to-one ratio to a varying ratio. Students adjust the amount of yellow and blue paint to make the same shade of green paint at different scales but with equal ratios. These activities require students to use their

mathematical understanding to solve problems, make observations, and form conclusions. The materials include opportunities for students to justify and prove their answers through error analysis and explanations. For example, "Topic 6, Lesson 7" includes "Constructed Response 1," in which students explain when equations are correct and incorrect and provide evidence for equation equivalency to address TEKS 7.07, 7.10.A, and 7.11.A. This requires students to exhibit an understanding that meets TEKS standards.

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

- The grade 7 materials include "Items and Answers" questions in the "Assessment" Section. These questions progressively increase in rigor and complexity leading to grade-level proficiency. The bank offers a variety of questions that can be sorted by question type, complexity through the four tiers of Depth of Knowledge (DOK), and reading level. Each question shows the topic and standard alignment. The "Items and Answers" bank includes interactive items such as inline choice, hot spot, fill-in-the-blank, drag-and-drop, graphing, multiple choice, and multiple selection. The sample-created and teacher-created instructional assessments incorporate standards-aligned items across different levels of complexity using a variety of questions and types from the bank. Each question provides an outline of the aligned standards. For example, in "Test Designs," the sample-created assessments include "Mathematics 7 Topics 4-6 Sample Summative Assessment." The assessment assesses TEKS 7.02, 7.03.A, 7.03.B, 7.04.B, 7.04.D, 7.07, 7.10.A, 7.10.B, 7.10.C, 7.11.A, and 7.11.B. The cognitive complexity of the questions ranges from DOK 1 to DOK 3, and the questions are presented as open-ended, multiple choice, multiple selection, drag-and-drop, fill-in-the-blank, and hotspot.
- The grade 7 materials include question prompts for teachers and tasks for students that progressively increase in rigor and complexity, through lesson animations and interactive slides, "SAS," and additional practice, ultimately leading to grade-level proficiency on the TEKS. In the "Prepare Instruction" materials for each topic of the grade 7 course, the "Topic at a Glance" table shows all of the lessons within the topic, briefly describing the lesson and its practice opportunities. "Topic 3, Lessons 1–6" include an "SAS" with open-ended questions that students answer with calculations, application to similar problems, and explanations of their reasoning. In the "Deliver Instruction" Section for "Topic 4, Lesson 2," the materials include DOK 1 questions to engage students at the start of the lesson, such as, "What would you need to know to find the student's current grade in the class?" As the lesson progresses, the tasks increase in complexity by having students summarize their learning from the animation panels in their own words. This progression allows students to practice with on-grade-level content within a lesson. Students show their learning through an increase in the complexity of content by building on prior knowledge and learning acquired earlier in a topic. For example, "Topic 10" progresses as students review the area of 2-D shapes in "Lessons 2–3," use what they know to estimate the area of composite shapes in "Lessons 3–4," then solve for the composite area in "Lessons 5–6." These varying levels of increasing complexity require students to practice content-aligned tasks at grade level during the duration of a topic.



- The grade 7 materials provide "Staying Sharp" activities, "Constructed Response" tasks, "MARS" tasks, and "Literacy Tasks" that gradually increase in complexity, leading to grade-level proficiency for each topic. For example, in "Topic 3," "Lesson 8" and "Lesson 9" begin with the "MARS task: Tiling Squares" and end with students completing the "Literacy Task" where they write an essay to compare proportional and non-proportional linear relationships, arguing how to identify a proportional relationship. Students peer-review other students' drafts to determine the appropriate use of mathematical language and the logic, strength, and accuracy of the argument. In these tasks, the materials include a teacher rubric that provides guidance for grading where questions and tasks become progressively more challenging and intricate, fostering proficiency in mathematics standards at each grade level. For example, in "Topic 7, Lesson 6" the "MARS task: Counters" includes a teacher rubric that explains the task begins with questions slightly below the level of difficulty of the grade level to activate prior knowledge and ends with questions designed to stretch student thinking to connect their learning to new concepts.

## 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

**Materials demonstrate coherence across courses/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 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. 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.**

Evidence includes, but is not limited to:

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

- The *Mathematics 7 Scope and Sequence* presents logically sequenced topics throughout the year, creating a narrative of mathematics spanning grades 6–8 and beyond. The materials outline the concepts students will learn throughout the course and how they connect to previous and future learning. The material divides the grade 7 mathematics curriculum into twelve topics with 121 to 130 lessons. The material includes a topic description and identifies the grade level Texas Essential Knowledge and Skills (TEKS) for that topic that are either the primary focus for the topic or are foundational for future work. For example, in "Topic 7," students will utilize proportional reasoning to investigate probability concepts with TEKS 7.6.A, 7.6.B, 7.6.C, 7.6.D, 7.6.E, 7.6.H, and 7.6.I. The scope and sequence integrate prior concepts and procedures from previous grades and lessons earlier in the course, employing new mathematical knowledge and skills and building upon established understandings. For example, it explains students complete grade 6 with fluency in integer operations and solid foundations in one-step equations, area, and volume. The grade 7 course builds on students' prior work with operations of positive rational numbers to solve problems by extending to solving real-world and mathematical problems with positive and negative rational numbers, applying percents in formal understandings of rate, continuing to write expressions and

equations to lay the groundwork for functions in grade 8, building on proportional reasoning to generalize attributes of similarity and probability, and gaining fluency with area, surface area, and volume of 2- and 3-dimensional shapes. The material includes teacher guidance on when to incorporate corequisite support lessons by listing the corequisite standards from the previous grade and including the tasks from the "Grade 7 Corequisite Support Guide" so students can access and participate in grade-level content. For example, "Topic 1" lists corequisite TEKS 6.3.A, 6.3.E, and 6.5.A, along with reviewing the corequisite supports from "Appendix: Introducing and Representing Ratios" and "Appendix: Solidifying Your Skills with Positive Rational Numbers."

- The "Texas Mathematics 7 Course Rationale" includes a course overview explaining how the course helps students formalize and extend their grade 6 knowledge of proportional relationships to engage in a deeper study of key characteristics in multiple representations of proportionality in percent change, similarity, area and volume, probability, and statistics. Students formalize solving two-step equations and inequalities to prepare for the formal study of functions in grade 8. The material demonstrates how prior knowledge connects to developing "a deep foundation in proportional thinking early in the course as a tool to be applied throughout the year."
- The materials include resources to demonstrate how the concepts across courses are coherent and logically sequenced. For example, in the "Professional Support" sidebar, the "Developing Concepts Across Grades" Section outlines how concepts connect to previous learning. It states, "This selection of interactive essays represents the development of key concepts learners will encounter in their journey to mastery of mathematics—from middle school through high school mathematics, culminating in Calculus or Statistics." The essays focus on using functions, volume, rate, and proportionality and explain how students move from concrete to abstract representations of the concepts.
- The materials include appendix topics to reinforce and support the learning for the current course, including "Key Learning from Earlier Grades," "Solidifying Your Skills with Rational Numbers," "Solidifying Your Skills with Equations," "Introducing and Representing Ratios," "Understanding and Representing Rates," "Describing Data," and "Geometric Measurement." For example, the "Appendix: Key Learning from Earlier Grades" includes lessons and problem-solving resources that can be used to differentiate practice and review operations with rational numbers and solving equations.

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

- The "Texas Mathematics 7 Course Rationale" includes a course overview explaining students will build "a deep foundation in proportional thinking early in the course as a tool to be applied throughout the year." For example, students apply proportional relationships and understandings solidified in "Topics 1–4" to probability in "Topic 7," interpreting and comparing data in "Topic 8," and area and circumference of circles in "Topic 10." These topics utilize and connect patterns, ideas, and relationships between mathematical concepts throughout the course.

- The "Prepare Instruction" material includes an overview of the current topic and its connection to other topics throughout the course. The "About This Topic" Section demonstrates coherence across topics by connecting students' prior knowledge of concepts and procedures to new mathematical knowledge and skills. For example, "Topic 1" focuses on using ratios and exploring and applying proportional reasoning through multiple representations, including similarity and scaled images. It explains students will continue to use and study proportional relationships in graphs and equations later in the course.
- The "Staying Sharp" activities review key concepts from previous units to help students prepare for the current unit. For example, "Topic 6" includes "Staying Sharp 1," in which students review skills learned in the previous course, such as operations with integers and positive rational numbers, ordering rational numbers on a number line, and solving one-step equations. These skills help prepare students to extend their understanding of using operations with positive and negative rational numbers and solving two-step equations. The material includes a review of proportional relationships as learned in "Topic 2" of the current course. This material shows the connection of patterns, big ideas, and relationships between mathematical concepts throughout the course.

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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 "Texas Mathematics 7 Course Rationale" includes a course overview explaining how the course helps students formalize and extend their grade 6 knowledge of proportional relationships to engage in a deeper study of key characteristics in multiple representations of proportionality in percent change, similarity, area and volume, probability, and statistics. The materials explain that in grade 7, students formalize solving two-step equations and inequalities to prepare for the formal study of functions in grade 8. The material demonstrates how prior knowledge connects to developing "a deep foundation in proportional thinking early in the course as a tool to be applied throughout the year" and in future courses. For example, the description for "Topic 5" explains the topic builds on students' prior work of solving problems with positive rational numbers to real-world and mathematical problems involving positive and negative rational numbers. The "Connection to the TEKS and ELPS" Section emphasizes using cross-curricular strategies and the "Glossary," common to all courses, to support language acquisition.
- The grade 7 materials demonstrate coherence across topics by connecting the concepts and language learned in previous courses to those in future courses by way of the current course. The "Professional Support" sidebar includes the "Developing Concepts Across Grades" material that outlines how concepts connect from previous learning. It explains the essays represent the development of key concepts from middle through high school mathematics. The essays focus on using functions, volume, rate, and proportionality and explain how students move from concrete to abstract representations of the concepts while noting aligned vocabulary across courses. For example, the interactive animations in the "Rate" essay explain ratio, rate, unit rate, rate of change, and constant rate of change, showing how they relate to each other.

- The grade 7 materials include resources to demonstrate coherence with content and language across previous, current, and future courses. The "Professional Support" sidebar includes the "Going Beyond This Course" Section, which states, "This series of essays is designed to illustrate how certain fundamental knowledge and skills students acquire in this course connect to more advanced concepts in subsequent mathematics courses." The essays address rate of change, random variables, and volume. For example, the "Rate of Change" essay explains students in grade 7 interact with the constant of proportionality and rate of change before learning about other functional relationships in high school mathematics courses.
- The "Prepare Instruction" materials for all topics include teacher guidance on creating coherence in the language students have learned or will learn in the current course. For example, in "Topic 5," the "Language Support" Section shows coherence across topics by linking the language learned in prior courses, such as whole numbers, integers, and rational numbers, with what will be covered in the current course. The section provides a list of the core vocabulary in the current topic. The "Glossary" contains all core vocabulary, including definitions and visual representations. This supports coherence in language learning in previous, current, and future courses.

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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 grade 7 materials demonstrate a coherent progression throughout lessons. The lessons connect students' prior knowledge of concepts and procedures from the current and prior grade levels to new mathematical knowledge and skills. The "Course Topics" include appendices with lessons that address key topics from the previous grade, including operations with rational numbers and solving equations. In the "Appendix: Solidifying Your Skills with Equations," students connect their current learning to lessons on variables, expressions, properties, and solving one-step equations. For example, the "Solving One-Step Equations" lesson provides students with interactive animations using concrete examples of solving equations before students practice solving equations with inverse operations. The material requires students to summarize their process of solving one-step equations and provides practice in mathematical and real-world contexts. This guidance supports students in connecting what they have learned to what they will learn.
- The "Prepare Instruction" material for each topic provides an overview of the lessons within the topic, demonstrating coherence within each lesson by connecting students' prior knowledge of concepts and procedures from current and previous grade levels to new mathematical knowledge and skills. For example, "Topic 9" lists three prerequisite skills, finding experimental and theoretical probabilities, calculating the mean of a data set, and converting between equivalent forms of rational numbers, which were learned in previous courses and the current course's previous lessons. Across each topic, the materials demonstrate coherence from lesson to lesson by explicitly connecting relationships between mathematical concepts. The "Topic at a Glance" Section outlines each lesson with a brief description. For example, in "Topic 5," "Lesson 2" reviews operations with positive rational

numbers, "Lesson 4" reviews operations with positive and negative rational numbers, and "Lesson 7" applies operations with all rational numbers.

- In "Deliver Instruction" materials for each lesson, guidance prompts teachers to have students consider their prior learning and connect it to the current mathematical knowledge and skills. For example, in "Topic 2, Lesson 1," teachers prompt students to consider their prior learning of ratios and rates to connect it to the current learning of unit rates. In "Lesson 2," students use rates and proportional reasoning to solve real-world problems. In "Lesson 7," students use unit rates to identify the constant of proportionality from graphs, tables, equations, and verbal descriptions. These lessons illustrate coherence across lessons by establishing clear connections between patterns, overarching concepts, and relationships among mathematical ideas. The materials present a structured progression of concepts that logically develop, each lesson building upon the foundation laid by the previous ones.



## 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

**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 grade 7 materials provide spaced retrieval opportunities with previously learned skills and concepts across the topics. For example, the "Course Rationale" explains that students must apply their knowledge of proportional reasoning from "Topic 3" to make comparisons and predictions for probability scenarios in "Topic 7."
- The "Prepare Instruction" material explains the current topic and connections to previously learned topics. The "About This Topic" Section provides guidance for teachers to outline and understand previously taught content and how it connects to the current topic and content. For example, "Topic 3" builds on students' prior knowledge of ratios, rates, and proportional reasoning, skills learned in "Topic 1" and "Topic 2." This provides teachers with guidance to see the connection between the covered content across topics. The "Prepare Instruction" material includes a "Topic at a Glance" Section that shows all of the lessons within the topic, provides a brief description of each lesson, and includes practice opportunities to use with the lesson. For example, "Topic 1" is divided into thirteen lessons. In the "Lesson 6" "MARS Task," "Mixing Paints," students complete a paint mixing scenario to apply their knowledge of equivalent ratios and rates from "Lesson 5." This material provides teacher guidance on the connection between content covered across lessons.
- The "Deliver Instruction" materials include spaced retrieval opportunities to revisit skills and concepts learned earlier in the topics and lessons. The materials include teacher prompts and guidance for using practice opportunities with students. For example, in "Topic 6, Lesson 1," the "Opening and Framing Questions" prompt teachers to begin by asking students to think about equations they have written to solve problems earlier in the course to build a connection between equations and inequalities with one variable to those with two variables. In "Topic 10, Lesson 1," the materials prompt teachers to connect to prior learning by engaging students in the formulas provided with specific question stems to help them retrieve what they know about area and perimeter. The "Deliver Instruction" materials provide teachers with student resources that support the current lesson by retrieving previously learned content.

The "Staying Sharp" materials include two sections of practice problems; one spirals back to skills and concepts from previous learning and one helps students prepare for upcoming lessons. For example, "Topic 5, Lesson 1" includes "Staying Sharp 1," which reviews skills from "Topic 3" and "Topic 4" such as operations with positive rational numbers, proportional relationships, and applications of percents. The "Staying Sharp" activity supports upcoming lessons where students will operate with all rational numbers.

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

- The grade 7 materials provide interleaved practice opportunities with previously learned skills and concepts across topics and lessons as evidenced by the *Mathematics 7 Scope and Sequence* which shows related ideas taught in consecutive topics. For example, students practice ratios, introduced in "Topic 1," in subsequent topics including ratios and rates, patterns in proportional relationships, and applications of percents.
- In the "Prepare for Instruction" material for each unit, the "About This Topic" Section describes what students will learn and how interleaved practice opportunities are incorporated to integrate previously learned skills and concepts across lessons and units. For example, "Topic 5" explains that students build on their prior work with properties of operations with positive rational numbers from previous courses and topics by applying the same concepts to all rational numbers. The material offers students opportunities to practice their skills and build numerical fluency with the operations.
- The grade 7 materials include practice opportunities that require students to select and use multiple strategies rather than relying on a single strategy for every problem. For example, in "Topic 2, Lesson 8," students complete "Constructed Response 2" where they practice with previously learned skills and concepts from earlier lessons by showing mastery through problem-solving with ratios. Students complete the task by writing equations, making tables, and sketching graphs to represent the constant of proportionality. In "Topic 11," students may break up the composite shapes and nets in different ways to calculate the surface area and volume of prisms and pyramids. This topic provides practice with the 2D area formulas students were exposed to in "Topic 10." Each topic culminates with the topic quiz where students select strategies they have learned throughout the topic to solve a variety of problems. For example, "Topic 2" presents students with word problems, tables, and graphs in mathematical and real-world contexts as interactive item types where students must choose the strategy to solve for the ratios and rates.
- The "Staying Sharp" materials in each topic offer interleaved practice opportunities that integrate previously learned skills and concepts across lessons and units. For example, "Topic 5, Lesson 1" begins an overview of operations with rational numbers. The "Staying Sharp 1" material covers skills and concepts from prior topics, such as operations with positive rational numbers from previous courses and constant rate of change from "Topic 2," which prepares students to use those strategies throughout "Topic 5."

## 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

**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 in grade 7 include questions and tasks that have students engage with a variety of models and representations to interpret, analyze, and evaluate various concepts. In "Topic 3" "MARS Task: Tiling Squares," students use a visual pattern model to recognize, interpret, and evaluate patterns in proportional relationships. Students create a table and write an equation to represent the relationship shown in the model. In "Topic 4," students begin to use their knowledge of proportions when working with percents. In "Lesson 2," the material prompts teachers to provide students with examples for using tape diagrams with familiar benchmark percents. The "Student Activity Sheet (SAS)" includes a circle graph to represent weighted averages with percents in a classroom grade situation. Students use the information in the visual to determine the grade for a student. Students then interpret and analyze which tool, tape diagrams or circle graphs, could be used in mathematical situations. In "Lesson 4," students engage with animated panels to model percents as ratios by mixing ingredients to make lemonade. Students use the panels to change the amount of each ingredient while maintaining the total number of cups, exploring how the ratio adjusts the percent.
- The materials include questions and tasks that require students to evaluate the appropriate use of models and choose models to represent situations. In "Topic 6," students use algebra tiles on a scale to model solving two-step, one-variable equations before progressing to algebraic methods for the same equations. The "SAS" for "Lesson 4" includes questions encouraging students to use various models and representations to evaluate different concepts. Students begin by completing a table and plotting points on a graph to find answers for a given value for a variable. Then, students use balance scales as models for writing and solving equations.

- The materials include questions and tasks that support conceptual learning, leading from representations to mathematical concepts. In the "Topic 1" "Constructed Response 1" Section, students use a given representation of a person looking at a tree and a ruler from the same angle to evaluate similar triangles. Students analyze the information in the representation to set up ratios for a proportional relationship and solve the questions. In the "Topic 3" "Constructed Response 1" Section, students review a visual representation of cups in a proportional relationship to create a table and algebraic rule that can be used to extend the relationship beyond the representation. In "Topic 6, Lesson 2," students engage with representations of equations, tables, and graphs to illustrate linear relationships. In "Topic 7," students use and construct area models, tables, lists, and tree diagrams to represent and analyze probability events. The "SAS" in "Lesson 8" includes questions for students to determine and predict the probability of events using the representations provided and created.

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

- The materials require students to generate a variety of models that illustrate their comprehension of mathematical concepts in the "SAS" for the topics and lessons. In "Topic 3," students create tables and graphs to represent patterns in proportional relationships. In "Topic 5, Lesson 1," question 11 states, "Sketch a model that shows the relationship between whole numbers, integers, and rational numbers. Label each region with numerical examples." In "Topic 6, Lesson 4," students sketch a balance scale model to represent different equations and the process for solving the equations. In "Topic 8," students represent and interpret data by creating and analyzing bar graphs, dot plots, box plots, histograms, and circle graphs to determine the best representation. In "Topic 9, Lesson 2," students design and use simulations to determine the probability of simple events. Students choose models, including coin flips, number cubes, and spinners, to best represent situations. These examples demonstrate how the tasks and questions require a variety of models to represent mathematical situations.
- The "Constructed Response" Sections include questions and tasks that support conceptual learning, leading from representations to mathematical concepts. In the "Topic 2" "Constructed Response 2" Section, students find a unit rate and write an equation that relates the two quantities from each scenario. They make a table of values and sketch a graph of the relationship to identify the constant of proportionality. In the "Topic 3" "Constructed Response 1" Section, students use information from a diagram to make a table and write an algebraic rule to represent a proportional relationship.

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

- The "SAS" materials in the topics and lessons include questions and tasks for students to apply conceptual understanding to new situations and contexts. In "Topic 7, Lesson 12,"

students justify their explanations through thoughtful application of dependent probability events. Students first use models of sample space to represent the probability and then extend their understanding to word problems. In "Topic 8," students review graphs they have used previously. Students learn how to create and interpret histograms and circle graphs. In "Lesson 10," students apply their understanding of box plots, histograms, and bar graphs to determine why a given graph is misleading and decide on a better way to represent the data.

- The "Constructed Response" Sections and "MARS" tasks include questions and tasks that prompt students to apply conceptual understanding to new situations and contexts. In the "Topic 1" "Constructed Response 2" Section, students use their knowledge and understanding of ratios to adjust a recipe for vegetable soup by increasing the number of people served or the amount of ingredients needed. In the "Constructed Response 1" Section for "Topic 2," students analyze real-world pricing of sports drinks to answer and solve questions with unit rates. Students have to explain their thinking and justify their answers. In the "Topic 4" "Constructed Response 1" Section, students engage in an open-ended task with several correct solutions. Students use their understanding of percents to use proportions or models to solve problems. In "Topic 7, Lesson 9," the "MARS Task: Duck Game" requires students to use their knowledge of probability events to evaluate the chance of winning a board game. Students share their strategies for determining probability through models with classmates. In "Topic 9," students apply their conceptual understanding of probability to design and run a simulation in the "Constructed Response 1" Section to analyze different situations and their effects on the simulation. This guidance requires students to apply their understanding of what they learn to explain their thinking.

## 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>

**Materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level tasks. Materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures within the lesson and/or throughout a unit. Materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the lesson and throughout a unit. Materials contain embedded supports for teachers to guide students toward increasingly efficient approaches.**

Evidence includes, but is not limited to:

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

- The materials provide structured practice that progressively increases in difficulty to build student automaticity in completing grade-level tasks. In each lesson, students engage in interactive activities and complete the "Student Activity Sheets (SAS)" over the course of the lesson. As students work through the pages of the lesson, the digital platform tells students which questions from the "SAS" align with the online activity. Each activity prompts students to engage in thinking about a concept or answer a question. The activities increase in difficulty as students progress. In "Topic 2, Lesson 2," students watch and interact with the lesson animations to learn about calculating unit rates in relation to speed and gas mileage. Then students apply what they learn to similar practice situations to build automaticity in using unit rates. In "Topic 9, Lesson 4," students interact with the animation to learn how to design and use simulations for compound probability events. Students complete activities to identify the components of a simulation, perform a simulation, and design a simulation to determine probabilities. These activities build on knowledge throughout the lesson for students to apply what they learn in practice and build automaticity.
- The materials include resources and tasks designed for students to build fluency to complete grade-level tasks. The "Staying Sharp" practice pages include questions separated into two sections, preparing for upcoming lessons and practicing skills and concepts from previous topics. In "Topic 1," the "Staying Sharp 1" activity reviews conceptual questions from previous



courses, providing students the opportunity to practice their automaticity and fluency of skills necessary to learn the content in the current course. For "Topic 2," in both "Staying Sharp 1" and "Staying Sharp 2," students practice operations with rational numbers and calculating unit rates to review concepts and prepare for future lessons. In "Topic 4," "Staying Sharp 1" continues to build on these same concepts, providing more opportunities for students to build fluency. In "Topic 9" "Staying Sharp 1," students practice the prerequisite skills needed for designing simulations and practice previously taught skills and concepts, including operations with rational numbers and calculating unit rates.

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

- The "Lesson Activities" materials provide opportunities for students to apply efficient, flexible, and accurate mathematical procedures within lessons and topics. The structured interactive activities and accompanying practice in the "SAS" prompt students to reflect on the accuracy and efficiency of their solutions. Students analyze completed problems to identify errors and correct them. In "Topic 2, Lesson 5," teachers prompt students to "write a summary of the strategies that they used to solve the problems" and then compare their strategies with a partner. Students discuss the most efficient strategies for solving the problem accurately but still have the flexibility of choosing their preferred strategy. In "Topic 3, Lesson 5," students engage in tasks that allow them to choose different strategies for identifying proportional relationships, such as sketching a drawing or using colored tiles to create a model. Students use their models to build on the conceptual understanding of proportional relationships and refine their procedural skills through additional practice in tables, graphs, and equations. These materials provide practice of flexible mathematical procedures through multiple entry points and varied strategies.
- The "Constructed Response" activities in each topic require students to apply what they have learned throughout the topic efficiently and accurately in real-world scenarios. In the "Constructed Response 1" task for "Topic 1," students are given a real-world problem about purchasing sports drinks at a store. Students calculate the unit price for different quantities to determine which would be a better purchase if they want 24 drinks. Students calculate the amount of money either spent or saved. Students repeat the process with 102 drinks. The final question requires students to solve the same type of problem in reverse order by providing the amount a person has to spend and asking what options of packages would be appropriate for the maximum amount of drinks. In all questions, students must explain their reasoning for how they determined their answer. This activity gives students flexibility in solving the problems efficiently and accurately. In "Topic 9, Lesson 5," students design, run, and make modifications to a simulation. Students use what they have learned about probability and creating simulations, apply it to this new scenario, and make adjustments as needed.
- The topic resources include "Staying Sharp" practice activities where students practice applying efficient and adaptable mathematical procedures learned throughout the course. The material includes problems that revisit concepts covered in previous lessons or topics and concepts that prepare students for upcoming lessons. In "Topic 4," "Staying Sharp 1" reviews operations with rational numbers, calculating the constant rate of change, and

converting to percents. Students can choose the most efficient way to solve each problem accurately.

- The materials include a "Topic Quiz" at the end of each topic where students practice the application of efficient, flexible, and accurate mathematical procedures. The material presents questions in various formats, including multiple-choice, drag-and-drop, fill-in-the-blank, multiple-selection, and text entry. Students have the flexibility to choose the most efficient method to solve problems accurately. In "Topic 2," the "Topic Quiz" requires students to apply their understanding of rates and ratios in word problems, graphs, tables, and equations by working flexibly with the different representations to answer the questions. In "Topic 9," the "Topic Quiz" questions students about choosing the correct simulations to solve probability problems. Questions either provide the simulation and students must choose the correct results or provide the results with students choosing the appropriate simulation. These questions require students to flexibly transfer their knowledge between process and result.

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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 "Lesson Activities" materials provide opportunities for students to apply efficient, flexible, and accurate mathematical procedures within lessons and topics. The structured interactive activities and accompanying practice in the "SAS" prompt students to reflect on the accuracy and efficiency of their solutions. Students analyze completed problems to identify errors and correct them. In "Topic 2, Lesson 5," teachers prompt students to "write a summary of the strategies that they used to solve the problems" and then compare their strategies with a partner. Students discuss the most efficient strategies for solving the problem accurately but still have the flexibility of choosing their preferred strategy. In "Topic 3, Lesson 5," students engage in tasks that allow them to choose different strategies for identifying proportional relationships, such as sketching a drawing or using colored tiles to create a model. Students use their models to build on the conceptual understanding of proportional relationships and refine their procedural skills through additional practice in tables, graphs, and equations. These materials provide practice of flexible mathematical procedures through multiple entry points and varied strategies.
- The "Constructed Response" activities in each topic require students to apply what they have learned throughout the topic efficiently and accurately in real-world scenarios. In the "Constructed Response 1" task for "Topic 1," students are given a real-world problem about purchasing sports drinks at a store. Students calculate the unit price for different quantities to determine which would be a better purchase if they want 24 drinks. Students calculate the amount of money either spent or saved. Students repeat the process with 102 drinks. The final question requires students to solve the same type of problem in reverse order by providing the amount a person has to spend and asking what options of packages would be appropriate for the maximum amount of drinks. In all questions, students must explain their reasoning for how they determined their answer. This activity gives students flexibility in solving the problems efficiently and accurately. In "Topic 9, Lesson 5," students design, run, and make

modifications to a simulation. Students use what they have learned about probability and creating simulations, apply it to this new scenario, and make adjustments as needed.

- The topic resources include "Staying Sharp" practice activities where students practice applying efficient and adaptable mathematical procedures learned throughout the course. The material includes problems that revisit concepts covered in previous lessons or topics and concepts that prepare students for upcoming lessons. In "Topic 4," "Staying Sharp 1" reviews operations with rational numbers, calculating the constant rate of change, and converting to percents. Students can choose the most efficient way to solve each problem accurately.
- The materials include a "Topic Quiz" at the end of each topic where students practice the application of efficient, flexible, and accurate mathematical procedures. The material presents questions in various formats, including multiple-choice, drag-and-drop, fill-in-the-blank, multiple-selection, and text entry. Students have the flexibility to choose the most efficient method to solve problems accurately. In "Topic 2," the "Topic Quiz" requires students to apply their understanding of rates and ratios in word problems, graphs, tables, and equations by working flexibly with the different representations to answer the questions. In "Topic 9," the "Topic Quiz" questions students about choosing the correct simulations to solve probability problems. Questions either provide the simulation and students must choose the correct results or provide the results with students choosing the appropriate simulation. These questions require students to flexibly transfer their knowledge between process and result.

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

- The "Professional Support" sidebar includes "Getting Started" and "Teaching With" dropdowns for teachers to view essays and practical demonstrations of the resources in action. These resources explain how to effectively use and implement the resources for each topic, guiding students toward more efficient approaches. The "Lesson Planning and Practice" essay provides strategies and resources for supporting students in their problem-solving abilities, including utilizing academic literacy to "build essential vocabulary, connect representations, and communicate their understandings." This step-by-step support provides teachers with the guidance necessary to support students. The professional development materials include guided questions to help teachers internalize and establish connections with the provided resources. The "Moving from Concrete to Abstract" Section includes panels with video examples of teachers using the product to guide students towards efficient approaches and provide reflection questions for teachers. Teachers can use the information to consider how to guide students' thinking from concrete to abstract concepts.
- The "Prepare Instruction" materials at the beginning of each topic contain embedded supports for teachers to guide students toward increasingly efficient approaches. The "About this Topic" Section explains the trajectory within the topic and various approaches that can be used. In "Topic 7," the section explains students will investigate simple and compound probability using several models by conducting experiments, gathering data, and analyzing results. The materials include suggested scaffolded instruction, represented in the "Topic at a

Glance" Section by showing how the lessons build on skills being learned. In "Topic 10," students estimate the area in "Lesson 3," rearrange composite shapes to known shapes in "Lesson 4," and practice calculating the area of composite shapes in "Lesson 5."

- The "Deliver Instruction" materials provide teacher guidance to facilitate student learning and performance on tasks. Teacher guidance includes sample questions and prompts to guide student thinking towards more efficient methods. In "Topic 1, Lesson 12," the guidance prompts teachers to help students reflect on their work and strategies. Teachers have opportunities for one-on-one, small group, and whole-class discussions to point out and highlight the more efficient approaches. In "Topic 3, Lesson 7," the material provides questions for the teacher to ask students during their work. The material includes questions for the teacher to guide students in reviewing their understanding and debriefing as a class at the end of the lesson.

## Balance of Conceptual and Procedural Understanding

<b>5.3</b>	<b>Balance of Conceptual Understanding and Procedural Fluency</b>	<b>16/16</b>
5.3a	<a href="#">Materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed.</a>	<b>2/2</b>
5.3b	<a href="#">Questions and tasks include the use of concrete models and manipulatives, pictorial representation (figures/drawings), and abstract representations.</a>	<b>6/6</b>
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>	<b>8/8</b>

**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 "Professional Support" sidebar includes "Course Planning and Pacing" documents that provide teachers with additional support to plan and implement instruction with the aligned standards. The "Texas Mathematics 7 Course Rationale" material explains the Grade 7 Texas Essential Knowledge and Skills (TEKS) prioritizes number and operations, proportionality, expressions, equations, relationships between variables, and measurement and data. It explains the course addresses the key content areas identified by the TEKS, focusing on modeling, problem-solving, and multiple representations through exploration, analysis, and generalization. Students make connections to reinforce proportional skills and describe proportional relationships in multiple representations. While the course emphasizes and promotes students' conceptual development and understanding of the concepts, students practice and apply the concepts in real-world and mathematical problems. The *Mathematics 7 Scope and Sequence* outlines how each topic corresponds with specific TEKS. Each topic includes a description of how the TEKS will be addressed. In "Topic 4," the description explains students will investigate "the various uses of percent in solving real-world problems," including those in financial situations. TEKS 7.03.B, 7.04.D, 7.13.A, 7.13.E, and 7.13.F align to the topic. The "Mathematics 7 Lesson Alignments" material lists each lesson with the specific TEKS addressed. For example, in "Topic 9, Lesson 2," students determine probabilities from simulations as addressed by TEKS 7.06.B, 7.06.C, 7.06.H, and 7.06.I.
- The "Course Materials" sidebar includes the "Course Topics" tab and lists each topic addressed in the course. Each topic has a "Description" explaining the concepts and procedures addressed in the topic and an "Alignments" button that when clicked expands to

show the TEKS covered in that topic. In "Topic 9," the "Description" explains students will use their knowledge of probability to explore simulations and evaluate the reasonableness of their results through proportional reasoning. The "Alignments" show that the topic addresses TEKS 7.05.B, 7.08.C, 7.09.B, and 7.11.C.

- The "Prepare Instruction" material for each topic explains the concepts and procedures of the TEKS and how they are addressed in the topic. In "Topic 1," students solve problems with ratios, rates, and percents (7.04.D), generalize attributes of similarity (7.05.A), and solve mathematical and real-world problems involving similar shapes and scale drawings (7.05.C). The "Goals and Objectives" Section for "Topic 1" lists what students will be able to do by the end of the topic. These relate explicitly to the TEKS addressed in the topic by defining similarity and applying proportional reasoning throughout the lessons in the topic.
- The "Deliver Instruction" materials address procedural emphasis through explicit learning objectives focused on key procedural skills. "Topic 5, Lesson 1" prompts teachers to use the lesson materials to preview the lesson's goal. It states, "use a visual representation to describe relationships between sets of rational numbers." This objective corresponds to TEKS 7.02.A, as shown in the "Lesson Alignments" material. In "Topic 6, Lesson 6," aligned with TEKS 7.11.B, students use models through puzzles to represent real-world applications and transition to algebraic reasoning to solve problems. This provides opportunities for students to develop procedural fluency in working with proportions and ratios.

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

- The *Mathematics 7 Scope and Sequence* outlines the variety of models and manipulatives that will be used throughout the course as appropriate for grade 7 students. The material provides teachers with guidance on what type of models, manipulatives, and pictorial representations will be used. In "Topic 9," the description explains students will conduct simulations using coins, spinners, playing cards, and number cubes to translate the concept of probability from a hands-on experience to complex real-world situations.
- The grade 7 materials include tasks that use grade-level appropriate models, manipulatives, and pictures throughout the lesson activities. In initial lessons on a concept, models are used to establish foundational understanding before leading to abstract representations. In "Topic 6," students begin by using algebra tiles on a scale to solve one-variable, two-step equations before progressing to algebraic methods for the same equations. The "Student Activity Sheet (SAS)" for "Lesson 4" includes questions that encourage students to use models and abstract representations to solve equations. In "Topic 7," students use concrete models, such as coins, spinners, and number cubes, to determine experimental and theoretical probability. After students experience probability with the manipulatives, abstract representations of sample space lead students to make predictions of probability events. In "Topic 11," teachers provide students with 3-dimensional models to help students visualize their nets and calculate surface area and volume. The resources provide pictorial representations of the nets in practice, and then only represent the 3-dimensional figures abstractly.
- The materials provide questions or tasks with pictorial and abstract representations aligned to content and grade-level standards. In "Topic 3, Lesson 5," the materials provide students with



a variety of options to navigate several different models, including a tile pictorial representation, graphs, and tables, to help make meaning and gain proficiency with the concept of proportional relationships. In "Topic 5, Lesson 6," student activities include pictorial representations of feet and meter rulers and thermometers with both Fahrenheit and Celsius measurements to show students their equivalent measurements in different measurement systems. After students work with the visual representations, they calculate the conversion factors and processes to represent converting between measurement systems abstractly.

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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 "Professional Support" sidebar includes essays for "Teaching With" the material. The "Moving from Concrete to Abstract" essay explains the intentional timing of the lessons throughout the course. The goal is to offer students an experience that allows them to make a connection to abstract definitions and concepts. Lessons begin with a real-world connection and connection to prior learning. Students explore concrete models and representations through hands-on activities and lesson animations. Students work in small groups to discuss their understanding and mathematical strategies with peers and build a foundation in the abstract concepts.
- The "Lesson Activities" materials outline various opportunities for students to articulate their emerging understanding of mathematical concepts and procedures through modeling, discussion, and practice with digital animation activities that scaffold the learning of mathematical concepts. "Topic 2, Lesson 2" introduces unit rates as students explore a simulation with different speeds. Students use a gas pedal and a brake pedal to explore different speeds, and then record the results on a graph. The next animation shows filling a gas tank with the total price of the fill-up and the number of gallons. It first provides a visual representation of breaking up the price into gallons so students can make a connection to division of the units to find the unit rate. Then, the animation shows the relationship algebraically. "Lesson 3" builds on the understanding gathered from the models by requiring students to use information from word problems, without models, to solve for different unit rates. In "Topic 4, Lesson 4," students engage in animated real-world scenarios to understand percent proportions. Students adjust concentrations of water and lemon juice to create various ratios and represent them with percents. Students use their understanding of the relationship to extend it to similar questions. In the "Constructed Response 1" Section connected with the lesson, students translate their understanding of percent proportions to a new situation with popcorn kernels. The lesson's teacher guidance encourages the activity to be used "to reinforce the mathematical practices of modeling, constructing arguments, and communicating with others." This guidance and practice provide students the opportunity to connect, create, define, and explain concrete and representational models that lead to conceptual understanding. The materials provide students an opportunity to build automaticity with fluency skills necessary to complete grade-level tasks through multiple scaffolded tasks and practice opportunities within the lesson activities. In "Topic 8, Lesson 3," the animations walk students through multiple different graphical representations of a data

set and ask them to draw conclusions based on the data presented. Students receive hints and self-check their answers by using the "hint" and "check" buttons.

- The "SAS" materials include various supports for students in creating, defining, and explaining concrete and representational models. In "Topic 6, Lesson 5," students articulate their developing understanding of mathematical concepts and procedures through modeling, discussion, and practice activities of using algebra tiles to model the steps of solving one-variable, two-step equations. After the model is complete, students record each step using the symbolic representation of equations. "Topic 9" supports students' understanding of simulations with multiple models, such as spinners, number cubes, and coins, and includes guided questions to make predictions based on information provided in word problems.

## 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

**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 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.**

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 "Teaching English Language Learners" essay highlights the importance of providing opportunities for students to develop academic mathematical language using visuals, manipulatives, and other language development strategies. It outlines the importance of introducing English learners (EL) to mathematical concepts through diverse methods, such as pictures, kinesthetic movements, manipulatives, listening, speaking, reading, and writing, to cater to different learning styles and enhance comprehension. The course material supports this approach by offering definitions of key vocabulary terms within a new learning context, accompanied by rich visual representations and interactive animations that clarify the associated concepts. By providing these multiple pathways for language development, the essay states that students are not only exposed to academic vocabulary but are also able to understand and apply it within their mathematical learning, deepening their academic literacy and subject matter understanding.
- The "Topic Content" sidebar includes dropdowns to the teacher's instruction for the topic as a whole, the individual lessons, and the vocabulary list for the topic. The materials offer

opportunities for students to develop academic mathematical language through instructional strategies provided to teachers in the "Language Support" Section of the "Prepare Instruction" material at the beginning of each topic. This section includes the core vocabulary for the topic that students become familiar with using and defining. The section provides guidance by highlighting specific terms or strategies teachers can use with students to help them better understand the academic vocabulary. In "Topic 7," the guidance suggests the use of word wall activities and student vocabulary notebooks, noting to include visuals and definitions, to connect the words to the concepts. Each topic in the materials highlights the mathematical vocabulary introduced and practiced with the lessons under the "Vocabulary" Section. The listed words link to the online glossary that provides each word's definition in both English and Spanish, along with an example. In "Topic 9," *sample space* is listed, and the glossary explains it is "an organized list of all the possible outcomes of a probability experiment." An illustration representing the sample space of rolling two number cubes is provided beneath the definition.

- The "Deliver Instruction" materials include advice for teachers to support academic language development. In "Topic 1, Lesson 1," advice in the "Lesson Activities" Section includes modeling ratio relationships through concrete, real-world experiences, such as mixing paint. The "Support for ELL/Other Special Populations" Section includes additional advice to support English learners and other special populations. In "Topic 7, Lesson 1," the material provides embedded support for the teachers to use with unfamiliar vocabulary, such as providing time for students to record terms, definitions, and visual representations in vocabulary notebooks. It suggests using an anchor chart with a sample experiment to help all students connect the terms to the concept.
- The "Lesson Activities" Section includes student-facing lesson animations and tasks that include content and language supports. "Topic 1, Lesson 11" includes a "Language Note" for students, which gives different definitions and examples of when they might see or use the word *sample*. It provides different contexts for the word along with the mathematical context. The "Constructed Response" activities embedded within the topics provide students the opportunity to develop their academic mathematical language through specific tasks where they apply new words they have learned in the topic in their writing. In "Topic 4," students learn about applying percents in proportional relationships. The "Constructed Response 2" task asks them to reflect on a real-world, financial scenario about percent. Students represent and justify their answers through academic writing and models. The "Student Activity Sheet (SAS)" for "Topic 6, Lesson 6" prompts students to interact with vocabulary. Students define and represent the vocabulary terms in their own words and examples.

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

- The "Teaching English Language Learners" essay provides guidance for teachers on scaffolding and supports for student development and use of academic mathematical vocabulary in context. It emphasizes introducing English learners to mathematical concepts before naming them with academic vocabulary, allowing for understanding through experiences and discussions. The course materials aid this process by providing definitions of key terms within the context of new learning, supported by visual representations and

interactive animations. The essay highlights practical teaching strategies with descriptions of their use, such as using pictures, kinesthetic movements, manipulatives, and various language activities to support different learning styles. This contextual approach encourages students to not just memorize words but understand and apply them within their mathematical learning. This approach enhances student academic vocabulary building and overall comprehension.

- The "Prepare Instruction" material for each topic includes the "Language Support" Section, which offers guidance for teachers in introducing and promoting student use of academic vocabulary. The materials include the core vocabulary of the topic and provide scaffolding teachers can use to assist students in developing and employing academic vocabulary. In "Topic 7," the guidance encourages teachers to use word wall activities and explains the words in the topic are well suited to using visuals with definitions in student vocabulary notebooks.
- The "Deliver Instruction" materials include embedded guidance for teachers to support students with scaffolding around the use of academic mathematical vocabulary in context. The lessons include "Classroom Strategies" and "Support for ELL/Other Special Populations" Sections, which recommend turn-and-talks and sentence frames to support student engagement with vocabulary. "Topic 2, Lesson 3" guides teachers to use a word wall activity where the teacher chooses two words from the lesson and students explain how they are connected. Another support gives the teacher sentence stems for students to use during written or verbal explanations. In "Topic 9, Lesson 5," teachers provide students with the strategy of underlining any words they may not know so they can be addressed through discussion.

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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 "Teaching English Language Learners" essay integrates various instructional strategies and embedded supports for English learners across multiple dimensions of learning. The essay outlines practical teaching strategies aligned with English learners' needs and demonstrates how the course materials support these strategies. The essay highlights the importance of building academic vocabulary by defining terms within the context of learning, specifically by embedding guidance for vocabulary, syntax, and discourse to support mathematical conversations. The strategies include students keeping a vocabulary notebook, participating in think-alouds, using echo-repeat or choral chants, participating in activities with word walls, and using multiple representations. The "Fostering Student Discourse" Section emphasizes that the teacher should provide frequent opportunities for students to speak and write about the content in meaningful ways that encourage them to reason, justify, generalize, and deepen content knowledge. It explains the guiding questions and questioning strategies embedded throughout the lessons support teachers in helping students build

conceptual understanding by evaluating evidence and revising their thinking. It includes explicit strategies with instructions teachers can implement in the classroom, including think-write-pair-share, sentence frames or stems, adapted activities, talk-read-talk-write, and Kagan structures.

- The "Deliver Instruction" materials for each lesson include embedded guidance for the teacher to support the application of appropriate mathematical language, facilitating opportunities for students to hear, refine, and use math language with peers, and develop their math language toolkit over time. The lessons include "Classroom Strategies" for teachers, including tasks like turn-and-talks, English learner support strategies, language strategies, and other engagement strategies. In "Topic 3, Lesson 3" the "Mathematical Processes and Practices" strategy encourages teachers to have students construct viable arguments about algebraic rules they have created and then share them with the class. Students have time to critique the reasoning of peers' arguments. In doing so, students hear and use math language to develop an understanding of the content. The materials include various types of questions for the teacher that open discussion with students through opportunities for whole- and small-group mathematical dialogue in each topic. For example, in the grade 7 materials in "Topic 9, Lesson 1" under the "Deliver Instruction" Section, teachers are provided with "Opening and Framing Questions," guiding questions with exemplar answers to use throughout the lesson activity, and "Further Questions" to close the lesson. Questions within the lesson, with exemplar responses in brackets, include, "What conditions are you simulating? [that 30% of a population will vote for Mayor Grady]" and "How will you represent that condition? [You could randomly generate the digits 0 through 9 and count the frequency of the digits 0, 1, 2.]"
- The student-facing activities in lessons include opportunities to work collaboratively with peers to support their mathematical language development. Each student-facing activity includes a teacher key or rubric to provide teachers with exemplar responses. "Topic 1, Lesson 8" includes the "MARS Task: Cereal," where students reinforce and process mathematical problem-solving with the ideas explored in the previous lessons in this topic. The questions for this lesson ask students to make observations about cereal boxes and use the nutritional facts to make healthy decisions when purchasing. For this activity, students show their work and provide a written explanation of their thinking and strategies. As students work, the teacher monitors their progress and encourages students to make sense of the problem by explaining to themselves or the teacher the meaning of the two questions. After students work independently, students partner up and share their strategies and answers with a peer. Since students are required to provide a written explanation, sharing their ideas aloud with a partner provides them the opportunity to organize their thoughts for writing. During the whole class debrief, the teacher encourages active listening by asking questions based on the student's explanation or by asking students to restate what they heard. The teacher rubric provides exemplar answers with student work to help teachers evaluate their students' work. The "Student Activity Sheet (SAS)" for "Topic 6, Lesson 6" offers a set of discussion questions designed to facilitate open discourse among students while guiding them towards exemplar responses to questions and tasks using their developed mathematical language. These questions encourage students to use precise language, provide evidence to support their answers, and justify proportional relationship through growth of aliens in the illustrations. The



teacher key explains that student responses may vary but provides example answers to the questions to help teachers guide students in using their mathematical language.

## Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

**Process standards are integrated appropriately into the materials.**

- The "Texas Mathematics 7 Course Rationale" explains how the course connects the learning to the mathematical process standards outlined in the Texas Essential Knowledge and Skills (TEKS). The mathematical process standards expect students to solve problems in everyday life, apply a problem-solving model, select appropriate tools, communicate ideas and reasoning, create and use representations, analyze relationships, and display, explain, and justify using mathematical language. The "Course Rationale" notes the emphasis on engaging in exploration, problem-solving, multiple representations, and making connections both conceptually and in real-world contexts throughout the course. The material details the use of visual contexts throughout the materials to help students develop their academic vocabulary. In the "Course Order and Concept Connections" Section, each topic is grouped into units that include a description of how students will interact with the content. "Topic 6," for example, requires students to represent linear relationships with multiple representations, including verbal descriptions, tables, graphs, and equations.
- The *Mathematics 7 Scope and Sequence* material outlines the process standards and their integration throughout the course materials. Students will acquire and demonstrate mathematical understanding through the use of mathematical processes. The material states, "These processes should become the natural way in which students come to understand and do mathematics." It explains students should pay particular attention to communicating and reasoning using multiple representations and applying mathematics to real-world contexts through strategic tools and precise academic language.

- The "Deliver Instruction" material lists a "Goals and Objectives" Section for students that corresponds with the mathematical process standards. In "Topic 3, Lesson 1," students analyze relationships among factors in rate problems and use rates and proportional reasoning to solve real-world problems. The "Opening and Framing Questions" of the lesson prompt teachers to allow students to communicate ideas and their reasoning. During the lesson, students share their strategies, requiring them to display, explain, and justify their understanding using mathematical language. In "Topic 4, Lesson 7," tasks require students to strategically use tools, such as rulers and tracing paper, to solve problems. The "Student Activity Sheet (SAS)" for "Topic 8, Lesson 10" incorporates questions and tasks that encourage students to apply their conceptual understanding to novel problem situations and contexts, guiding them to justify their explanations through application.

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

- The "Texas Mathematics 7 Course Rationale" provides an overview and explanation of how the process standards are embedded throughout the course. The process standards outline that students will solve problems in everyday life, apply a problem-solving model, select appropriate tools, communicate ideas and reasoning, create and use representations, analyze relationships, and display, explain, and justify using mathematical language. The material explains students have consistent opportunities to practice and apply their mathematical learning to real-world problems. Students also engage in exploration and problem-solving, use multiple representations, such as verbal, tabular, pictorial, graphical, and algebraic, and make connections between concepts. It explains how visual contexts assist students in developing academic vocabulary through language and classroom strategies guidance for teachers. The "Course Order and Concept Connections" Section groups topics into units that include a description of how students will interact with the content. "Topic 6" requires students to represent linear relationships with multiple representations, including verbal descriptions, tables, graphs, and equations, and interpret their symbolic representations based on the contexts being investigated.
- The *Mathematics 7 Scope and Sequence* outlines the process standards and their integration throughout the course materials to acquire and demonstrate mathematical understanding. It explains, "These processes should become the natural way in which students come to understand and do mathematics." The material discusses how the current grade level utilizes the process standards throughout the course, including having students pay particular attention to communication and reasoning of mathematical concepts through multiple representations, applying mathematics to real-world contexts, and using strategic tools and precise language.
- In the "Course Materials" sidebar, the "About the Course" material describes the course's development of student's ability to use key mathematical processes. It explains some processes may be more pertinent or centric to the topic or lesson, depending on the content. It emphasizes students should pay particular attention to communication and reasoning of mathematical concepts through multiple representations, applying mathematics to real-world contexts, and using strategic tools and precise language.

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

- The "Texas Mathematic 7 Course Rationale" provides an overview and explanation of how the process standards are embedded throughout the course. The process standards outline that students will solve problems in everyday life, apply a problem-solving model, select appropriate tools, communicate ideas and reasoning, create and use representations, analyze relationships, and display, explain, and justify using mathematical language. The material explains students have consistent opportunities to practice and apply their mathematical learning to real-world problems. Students also engage in exploration and problem-solving, use multiple representations, such as verbal, tabular, pictorial, graphical, and algebraic, and make connections between concepts. It explains how visual contexts assist students in developing academic vocabulary through language and classroom strategies guidance for teachers. The "Course Order and Concept Connections" Section groups topics into units that include a description of how students will interact with the content. In "Topic 1," students explore real-world concepts like speed and make conjectures while testing predictions. In "Topic 4," students learn about percents in real-world contexts by building on the use of pictorial models and abstract representations of proportional relationships. "Topic 6" requires students to represent linear relationships with multiple representations, including verbal descriptions, tables, graphs, and equations, and interpret their symbolic representations based on the contexts being investigated.
- The *Mathematics 7 Scope and Sequence* features a description for each unit, detailing how process standards are integrated and interconnected throughout the entirety of the unit alongside the TEKS relevant to the topic. In "Topic 2," students represent rates and unit rates, including constant rates of change, through pictorial, tabular, verbal, numeric, graphical, and algebraic representations for real-world and mathematical situations, as described by TEKS 7.04.A.
- The "Prepare Instruction" material for each topic explains the connection of the process standards to the content of the topic. "Topic 1" states that students will engage in real-world applications with ratios, such as mixing paint. Students create and use multiple representations for proportional reasoning to explore and make reasonable conclusions while testing their predictions. Students communicate their ideas and reasoning through problem-solving and analyzing proportional relationships. The material includes "Additional Resources" for teachers to provide for students to select appropriate tools. These materials range from classroom manipulatives, such as rulers and counters, to real-world items, such as cereal boxes and juice concentrate. As part of the goals and objectives, students analyze relationships between scale factor and area of shapes. In "Topic 9," students use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Students choose tools, including spinners, playing cards, coins, and number cubes, to design appropriate simulations for given mathematical and real-world situations.

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

- The "Deliver Instruction" material for each lesson explains the connection of the process standards to the content of the lesson in the "Goals and Objectives" Section. In "Topic 1, Lesson 1," students will apply proportional reasoning in a range of contexts. In "Topic 2, Lesson 1," students analyze relationships among factors in rate problems and use rates and proportional reasoning to solve real-world problems. The "Opening and Framing Questions" of the lesson introduce students to the lesson's concepts through real-world or mathematical situations. Students communicate their mathematical ideas and reasoning through whole-class discussions. In "Topic 11, Lesson 2," students identify the bases and lateral faces of everyday items, such as cereal boxes, to introduce the necessary pieces for calculating surface area.
- The "Deliver Instruction" material includes teacher prompts and guidance for helping students use and apply the process standards in the "Lesson Activities" Section. In "Topic 3, Lesson 3," "Mathematical Processes and Practices," guidance to teachers explains that students will construct a variety of arguments in relation to the proportional relationship being studied. It prompts teachers to reinforce the practice of constructing viable arguments and critiquing others' reasoning by using mathematical language. In "Lesson 5," students create and use representations to organize, record, and communicate mathematical ideas through models or sketches. "Topic 5, Lesson 3" guides teachers to prompt students to explain and justify mathematical ideas and arguments using precise mathematical language in written and oral communication. In "Topic 9, Lesson 4," teachers instruct students to use the model of their choice for designing simulations and predicting probabilities. In "Lesson 5," students must clearly describe different simulations, showing they understand different representations.

## 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

**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 include lessons that require students to think mathematically and make sense of mathematics by persevering through solving problems. In "Topic 2, Lesson 7," students learn about unit rate equations. Students use the provided information in the scenarios and graphs to determine the constant of proportionality or a unit rate to write an equation. Students use current and previous learning to solve and calculate unit rates and apply them to linear equations. The materials provide opportunities for student discussion around the key concepts of the lesson that demonstrate their mathematical thinking and sense-making. In "Topic 9, Lesson 3," the lesson includes discussion questions for students to explain their thinking about a given scenario involving probability. Teachers prompt students with questions that promote their sense-making of the mathematical concepts.
- The materials include "MARS Tasks" which require students to understand, explain, and justify that there are multiple ways to solve a problem. In the "Topic 4, Lesson 10" "MARS Task," "Fudge," students enhance their problem-solving methodologies and build upon concepts previously introduced in the topic. Students engage in mathematical thinking, persist in problem-solving, and gain an understanding of mathematics by using percents to determine how to make a profit. Students show their work and clarify their thinking by writing their explanations. "Topic 7, Lesson 6" includes a description of the opportunity students have to think mathematically and persevere through solving problems in the "MARS Task," "Counters," explaining that the task "reinforces processes for mathematical problem-solving with the ideas explored in the previous lessons." Students build on their understanding of probability by using given probabilities to work backward and answer questions about the sample space.



Students extend their knowledge of the sample space to a game-like scenario and explain why the game would not raise funds.

- The "Constructed Response" tasks in the material require students to extend their knowledge of mathematical concepts to real-world scenarios through mathematical problem-solving. In "Topic 1," "Constructed Response 3" requires students to use a recipe of their choosing and scale it up or down for a given amount of people. Students determine the amount of each ingredient needed. In the final question, three more people join. Students determine how much more of each ingredient is needed. The activity provides students the opportunity to think mathematically, persevere through problem-solving, and make sense of mathematics as they work through each question. In "Topic 6, Lesson 7" "Constructed Response 1," students initially work independently and then pair up to share their solutions and strategies. Teachers encourage students to critique peers' arguments and prompt them to share with the class. Students share their approach to thinking through tasks, persevering through problems, and making meaning of them.

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

- In the "Lesson Activities" and "Student Activity Sheet (SAS)," materials support students in understanding, explaining, and justifying their ability to solve problems in multiple ways through discussion with peers. The "Topic 1, Lesson 1" "SAS" requires students to represent ratios in different ways. Students find equivalent ratios and use information in the ratios to solve for other information. Questions require students to explain their reasoning or thinking for how they came to their answer. Students make inferences based on their information. In "Topic 3, Lesson 5," students share how they found multiple ways to determine the number of tiles surrounding the pool without counting each tile individually. The different methods show they all lead to the same algebraic rule, justifying multiple ways to solve the problem.
- The "Deliver Instruction" material for each lesson offers teacher guidance that supports students in explaining various approaches to problem-solving and completing tasks. In "Topic 5, Lesson 5," guidance prompts teachers to engage students in a discussion explaining how they solved a puzzle and explore the different ways students chose to approach the task. It states, "Tie solution methods together so students can see multiple ways of viewing the mathematics correctly." In "Topic 5, Lesson 6," teacher guidance helps students grasp, articulate, and validate the concept that there are various approaches to solving problems and accomplishing tasks. Teachers prompt students to contemplate alternative methods they could have employed to solve the problem and select pairs that use different approaches to share their explanations and reasoning with the class.
- The "Constructed Response" tasks and "MARS Tasks" require students to justify their responses and show multiple ways of solving problems and completing tasks. In "Topic 4, Lesson 8," the "Mars Task," "25% Sale," stimulates students' comprehension and explanation of the diversity of problem-solving approaches. The "About this Task" Section states, "Students can use a wide variety of approaches to answer these questions, which adds to the richness of the task." This approach exposes them to different methods and enhances their ability to think flexibly when tackling various problem-solving scenarios and completing tasks.

Students must justify their answers in writing. In the "Constructed Response 1" task for "Topic 9, Lesson 5," students justify their responses and show multiple ways of solving problems and completing tasks. Students must choose and run a simulation appropriate to the situation and explain their justification for their choice. Students answer questions focused on adjusting the simulation and its effects on the outcomes. The teacher key explains that answers may vary based on the simulation students choose to solve problems, and it provides possible solutions for teachers to compare to students' answers to check for understanding.

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

- The materials include opportunities for students to do math with peers and teachers throughout the lesson activities. In "Topic 5, Lesson 11," students complete problems to show their understanding of rational numbers by completing the "Topic Quiz." The quiz includes mathematical and real-world scenarios in which students must choose the appropriate method to answer the questions. It includes a variety of question types, such as multiple choice, drag-and-drop, multiple selection, text entry, and inline choice. In "Topic 6, Lesson 4," the guidance encourages teachers to have students collaborate to practice solving the four equations illustrated in panel 1 of the animation. Teachers prompt students to document their algebraic steps that reflect the actions they take to solve the equation on the balance scale.
- The extension tasks, such as "Constructed Response" and "Literacy Tasks," require students to write about and discuss math with peers and the class to deepen student learning and understanding of mathematical concepts. In "Topic 8, Lesson 11," students complete a "Literacy Task" demonstrating their understanding of statistical measures to analyze and compare data. Students first draft their report and then have a peer review it. This provides time for students to compare and defend their arguments through questions posed by peers. In "Topic 9, Lesson 5" "Constructed Response 1," students complete a simulation about baseball to make predictions. Students work in pairs to complete the task and explain their process through writing. Guidance prompts teachers to have students share their processes and results with the class.
- The materials require students to make sense of mathematics through opportunities for classroom discourse where students discuss their mathematical thinking, share different solution strategies, make connections, and engage in collaborative learning with peers. In "Topic 5, Lesson 2," teachers guide students to review their knowledge of rational numbers in a think-pair-share activity. Students compare and discuss their solutions. Further in the lesson, teachers use the question prompts to evaluate student understanding and extend the learning. "Topic 6, Lesson 5" provides "Opening and Framing Questions" for teachers to elicit students' thoughts about modeling with algebra tiles. The guidance prompts teachers to have students work in pairs and present their answers to solving equations to the class using algebra tiles.

## 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

**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 grade 7 materials guide teachers to facilitate student sharing and reflection on their problem-solving approach through explanations. In "Topic 2, Lesson 5," the "Deliver Instruction" materials prompt teachers to have students write a summary of the strategies they used to solve the problems, work with a partner to compare strategies, and restate one another's strategies in their own words. In "Topic 4, Lesson 10," teacher guidance suggests pairing students to share their strategies and answers. It prompts teachers to remind students to include their written explanations in their final work as preparation to share their explanation of the strategy with the class.
- The grade 7 materials guide teachers to facilitate student sharing and reflection on their problem-solving approach through arguments. In "Constructed Response 1" for "Topic 2, Lesson 3," students must solve real-world problems using rates and proportional reasoning. The "Deliver Instruction" material prompts teachers to have students share their explanations with classmates to promote the use of viable mathematical arguments. Students compare answers with peers to provide constructive critiques of peers' work and defend their own choices and strategies. In "Topic 8, Lesson 8," students solve problems with qualitative and quantitative predictions and comparisons in the "MARS Task," "Best Guess." As students collect and analyze data, teachers guide students in constructing viable arguments to defend their claims about the data and the processes they used to analyze the data. Teachers then encourage students to share their responses and rationales and critique their peers' reasoning.
- The grade 7 materials guide teachers to facilitate student sharing and reflection on their problem-solving approach through justifications. In the "Deliver Instruction" material for "Topic 3, Lesson 8," teacher prompts include specific strategies, such as active listening and rephrasing, to use with the "MARS Task," "Tiling Squares," to encourage students to justify their answers and explain their approach to their peers. Students share their strategies and justify their reasoning to the class. The teacher asks other students to restate the strategy and

justification, providing time for students to reflect on their strategies and efficiency. In "Topic 5, Lesson 5," students engage with an interactive panel to utilize their math knowledge of elevation. The animation provides visual, interactive modules that demonstrate elevation change for students to observe the mathematical concepts through a hiking trail map. Teacher resources facilitate student processing through various questioning prompts requiring students to explain their reasoning and justify the accuracy of their solutions.

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

- The grade 7 materials offer teacher prompts and guidance for providing explanatory feedback addressing student responses. In "Topic 7, Lesson 12," students brainstorm examples of finding compound probability without replacement. The material prompts teachers to introduce examples if students struggle to come up with their own. Later in the lesson, guidance suggests not explaining problems if students were successful in the previous tasks. "Topic 9, Lesson 4" provides teachers with guidance for students who think they have found the mean hits for the season when they need to find the hits per game, and instructs teachers to have students include the units to avoid confusion.
- The materials support teachers by providing prompts and detailed guidance on common misconceptions. The "Deliver Instruction" material for "Topic 1, Lesson 6" gives the teacher guidance throughout the lesson, including a note about common misunderstandings with the part-to-whole relationship and a note about students struggling to find a percentage. Both notes come with prompts and probing questions for the teacher to help the students. "Topic 10, Lesson 4" prompts teachers to look for indications of misconceptions and gives strategies to guide students in clarifying the concepts about areas of composite figures. The guidance suggests using manipulatives to help students understand that area is not defined differently for different geometric shapes. Using manipulatives to visualize square units in geometric shapes, such as circles, guides students to develop and use the correct formula.