Publisher Name	Program Name
Cosenza & Associates, LLC	*Math*
Subject	**Grade Level**
Mathematics	7

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

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

Quality Review Overall Score: **219 / 227**

Quality Review Summary

Rubric Section	Quality Rating
1. Intentional Instructional Design	**52 / 53**
2. Progress Monitoring	**22 / 28**
3. Supports for All Learners	**32 / 32**
4. Depth and Coherence of Key Concepts	**22 / 23**
5. Balance of Conceptual and Procedural Understanding	**66 / 66**
6. Productive Struggle	**25 / 25**

Strengths

- 1.1 Course-Level Design: Materials include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course, with suggested pacing guides for various instructional calendars, explanations for the rationale of unit order and concept connections, guidance for unit and lesson internalization, and resources to support administrators and instructional coaches in implementing the materials as designed.
- 1.3 Lesson-Level Design: Materials include comprehensive, structured lesson plans with daily objectives, questions, tasks, materials, and instructional assessments required to meet the content and language standards. They also provide a lesson overview outlining the suggested timing for each component, a list of necessary teacher and student materials, and guidance on the effective use of lesson materials for extended practice, such as homework, extension, and enrichment.
- 2.2 Data Analysis and Progress Monitoring: Materials include instructional assessments and scoring information that provide guidance for interpreting and responding to student

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

- 3.1 Differentiation and Scaffolds: Materials include teacher guidance for differentiated instruction, activities, and scaffolded lessons for students who have not yet reached proficiency, pre-teaching or embedded supports for unfamiliar vocabulary and references in text, and guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.
- 3.2 Instructional Methods: Materials include prompts and guidance to support teachers in modeling, explaining, and directly and explicitly communicating concepts to be learned. They provide teacher guidance and recommendations for effective lesson delivery using various instructional approaches, and support multiple types of practice with guidance on recommended structures, such as whole group, small group, and individual settings, to ensure effective implementation.
- 3.3 Support for Emergent Bilingual Students: Materials provide guidance for teachers in bilingual/ESL programs, support academic vocabulary and comprehension, and include resources for metalinguistic transfer in dual language immersion programs.
- 4.1 Depth of Key Concepts: Materials provide practice opportunities and instructional assessments that require students to demonstrate depth of understanding aligned to the TEKS, with questions and tasks that progressively increase in rigor and complexity, leading to grade-level proficiency in mathematics standards.
- 4.3 Spaced and Interleaved Practice: Materials provide spaced retrieval and interleaved practice opportunities with previously learned skills and concepts across lessons and units.
- 5.1 Development of Conceptual Understanding: Materials include questions and tasks that require students to interpret, analyze, and evaluate various models for mathematical concepts, create models to represent mathematical situations, and apply conceptual understanding to new problem situations and contexts.
- 5.2 Development of Fluency: Materials provide tasks designed to build student automaticity and fluency for grade-level tasks, offer opportunities to practice efficient and accurate mathematical procedures, evaluate procedures for efficiency and accuracy, and include embedded supports for teachers to guide students toward more efficient approaches.
- 5.3 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

- 1.2 Unit-Level Design: Materials do not include unit overviews that provide essential background content knowledge for teaching the unit concepts effectively
- 2.1 Instructional Assessments: Materials do not have diagnostic assessments at the unit and lesson levels with varied tasks and questions.
- 4.2 Coherence of Key Concepts: Materials do not explicitly connect patterns between mathematical concepts.

Summary

Cosenza & Associates, LLC *Math* is a Mathematics 6–8 program. It provides a detailed, year-long scope and sequence that allows comprehensive planning for educators and incorporates the application of the TEKS. Daily instructional guidance maintains consistent sequences and routines, including teacher modeling, hands-on activities, partner work, and both guided and independent practice. Each lesson begins with an exploration, where students work through activities to demonstrate beginning levels of understanding. Next, materials provide explanations and independent practice before presenting a real-world performance task, differentiated to help learners at all levels. Additionally, the program includes teacher support for addressing common misconceptions students might have regarding mathematical concepts.

Campus and district instructional leaders should consider the following:

- Teachers engage the learner throughout each lesson phase by providing support: worked-out examples, detailed instructions, sentence stems to guide teachers, sentence stems to prompt students, and teacher "look-fors" to monitor student understanding. While materials do not include diagnostic assessments; teachers are encouraged to observe students to assess their initial understanding.
- The materials support learners who demonstrate grade level proficiency and who fall below grade level proficiency; still, teachers may need to supplement supports for students working above grade-level proficiency. Materials mention enrichment activities in pacing guides and set aside days for "enrichment."

Intentional Instructional Design

1.1	Course-Level Design	15/15
1.1a	Materials include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course.	**5/5**
1.1b	Materials include suggested pacing (pacing guide/calendar) to support effective implementation for various instructional calendars (e.g., varying numbers of instructional days – 165, 180, 210).	**2/2**
1.1c	Materials include an explanation for the rationale of unit order as well as how concepts to be learned connect throughout the course.	**2/2**
1.1d	Materials include guidance, protocols, and/or templates for unit and lesson internalization.	**2/2**
1.1e	Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.	**4/4**

The materials include a scope and sequence outlining the Texas Essential Knowledge and Skills (TEKS), English Language Proficiency Standards (ELPS), concepts, and knowledge taught in the course. Materials include suggested pacing (pacing guide/calendar) to support effective implementation for various instructional calendars (e.g., varying numbers of instructional days–165, 180, and 210). Materials include an explanation for the rationale of unit order as well as how concepts to be learned connect throughout the course. Materials include guidance, protocols, and/or templates for unit and lesson internalization. Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.

Evidence includes, but is not limited to:

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

- *Math - Grade 7 (Teacher Course)* provides the *Grade 7 Mathematics Scope and Sequence* PDF, which outlines the "Year-at-a-Glance," Texas Essential Knowledge and Skills (TEKS) and English Language Proficiency Standards (ELPS) alignments, "Rationale for Unit Progression," and a bulleted list of new concepts and knowledge for grade 7.-
- The grade 7 "Year-at-a-Glance" specifies the Texas Essential Knowledge and Skills (TEKS) and English Language Proficiency Standards (ELPS) covered in each unit, ensuring alignment with state standards and providing a clear framework for instruction. For example, "Unit 1" covers TEKS 7.1A, 7.1B, 7.1E, 7.2A, 7.3A, 7.3B, 7.13A, and 7.13C. ELPS covered in "Unit 1" include 1.A, 2.E, 3.B, 3.E, 4.C, and 4.D. Materials provide a comprehensive pacing guide which lists all grade 7 TEKS in one chart and all grade 7 ELPS in another. Charts specify which unit(s) covers each ELPS. For example, 7.4A is taught in "Units 3 and 4." ELPS 1.A is addressed in "Units 1 and 7."
- The "Rationale for Unit Progression" explains "Units in the 2024 Grade 7 Mathematics materials are strategically sequenced with tight connections to the Texas Response to the

Curriculum Focal Points (TxRCFP) to create TEKS-aligned instructional materials in a logical progression." An additional chart compares the TxRCFP and the units within the curriculum. This rationale also includes explanations for concepts and knowledge "to be learned in Grade 7 Mathematics." The bulleted list includes "Equations and inequalities can be used to model a variety of contexts, including financial and geometric applications."

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

- Materials include a *Grade 7 Mathematics Pacing Guide* with options for 165, 180, and 210-day calendars, including "suggestions for scope changes to accommodate shortened semesters and testing schedules without interrupting the flow of necessary learning." The pacing guide details each daily focus, including unit, lesson, topic, TEKS, and ELPS, ensuring that the continuity of essential learning within the course is maintained.
- The pacing guide includes a table for 165 instructional days and ensures all content is covered. Specifically, materials explain "It is not recommended to reduce instructional time in Unit 4, Unit 5, Unit 7, nor Unit 8 as these units directly relate to future learning in high school credit Algebra and Geometry."-
- The pacing guide includes a table for 180 instructional days with suggestions to adjust the "time spent on specific units without disrupting the sequence of instruction and content coherence." For example, the pacing guide specifies completing daily lessons for "Unit 2 One-Variable, Two-Step Equations, and Inequalities" over twenty-four days, facilitating effective teaching within a shorter school year. In addition, "Unit 8 Representing and Analyzing Data" suggests teachers "reduce the number of instructional days for "Lesson 1 Representing and Interpreting Dot Plots and Stem-and-Leaf Plots" from four days to three days."
- The pacing guide includes a table for 210 instructional days and provides guidance on modifying the curriculum's scope and sequence, including 3–4 days of enrichment/extension opportunities after each unit test; for example, "Unit 3 Rates, Ratios, and Proportions" suggests twenty-one days with three days of enrichment.

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

- The "Rationale for Unit Progression" states, "Units in the 2024 Grade 7 Mathematics materials are strategically sequenced with strong connections to the Texas Response to the Curriculum Focal Points (TxRCFP), thereby creating TEKS-aligned instructional materials in a logical progression."
- The "Year-at-a-Glance" and the *Scope and Sequence* include a progression chart that shows how units connect to the TEKS, skills, and recurring topics across lessons. Materials explain skills previously taught, skills to be taught in the current grade, and skills to be addressed in subsequent grade levels. Materials also give evidence for each unit's placement and connections to other units in the scope and sequence. For example, "Unit 4 builds on the learning in Unit 3 to introduce the concept of a constant of proportionality and linear

functions. Unit 5 applies proportionality to the context of similar figures, and Unit 6 applies proportional reasoning to probabilities for simple and compound events." In addition, "Unit 9 ends the course by applying what students have learned about rational numbers and operations, equations, and proportional reasoning to real-world problems of personal financial literacy such as budgeting."

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

- The *Grade 7 Mathematics Teacher's Guide* provides a “Unit Internalization Protocol,” which includes checklists for reading, connecting, and anticipating steps teachers take to prepare for an entire unit. For example, the first step of the unit protocol prompts the teacher to “Read the information provided for the unit and make notes for your ‘three weeks from now’ self.” Teachers also begin with the end in mind by unpacking the unit assessments, answering “What will students need to know and be able to do to succeed in learning the content and processes in this unit?” and “As you read through the unit overview, how does learning build and connect throughout the unit?”
- The *Grade 7 Mathematics Teacher's Guide* provides a “Lesson Internalization Protocol,” which includes checklists for reading, connecting, and anticipating steps teachers take to prepare for the entire lesson. Teachers "read through the digital lesson pages and make notes for your ‘three weeks from now’ self.” Teachers also "connect lessons to culminating tasks" by “interpreting student performance on assessments, how these reflect levels of proficiency, and scoring information about student strengths, weaknesses, gaps, and common misconceptions." Furthermore, teachers answer “What will students need to know and be able to do to succeed in learning the content and processes in this lesson?”
- The *Grade 7 Mathematics Teacher's Guide* includes "Recommended Use of All Materials,” which outlines and details how educators can integrate “Technology,” “Enrichment/Extension,” “Research-Based Instructional Strategies,” and “Scaffolds” in each lesson/unit. For example, the “Research-Based Instructional Strategies (RBIS)” states that lessons should be "designed to begin with a rigorous conceptual exploratory application to ground procedural learning that occurs later in the lesson."

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

- The *Grade 7 Implementation Guide* offers a comprehensive materials list, including scissors, glue/tape/paste, graph paper, and counters.
- The material includes "Implementation Challenge(s).” For example, “Grade 7 mathematics is a course taught not only by teachers certified in mathematics but also by those certified for all core subjects... teacher content knowledge is a common stumbling block to excellent implementation of instructional materials." Therefore, the *Grade 7 Mathematics Implementation Guide* provides two resources to support administrators and instructional coaches during conversations with individual teachers or teachers in PLC: a “Plan-Do-Study-Act” cycle chart and an “Observation Protocol and Checklist.” The implementation model

utilizes four components: “Design,” “Facilitate,” “Analyze,” and “Improve.” In addition, materials include "Teacher Conversations to Support Implementation,” a guide that provides an observation checklist "to assess effectiveness and provide constructive feedback to teachers." For example, before a lesson, coaches are provided with questions to help prompt teachers for successful lessons. This checklist works for any lesson. An example of conversation starters includes these instructions: “Have a conversation with the teacher prior to the lesson. Potential conversation starters include: What are you most excited for students to learn/do/talk about during this lesson?” The checklist also offers prompts for observers during and after the lesson.

- The *Grade 7 Implementation Guide* offers continuous support for administrators and instructional coaches via a monthly email newsletter that contains “timely course-specific reminders" and “Implementation Challenge(s).” Coaches also have access to free webinars by appointment or in person. (In-person professional development is available and may incur an additional cost.)

Intentional Instructional Design

1.2	Unit-Level Design	3/4
1.2a	Materials include comprehensive unit overviews that provide the background content knowledge and academic vocabulary necessary to effectively teach the concepts in the unit.	**1/2**
1.2b	Materials contain supports for families in both Spanish and English for each unit with suggestions on supporting the progress of their student.	**2/2**

The materials include unit overviews that provide the academic vocabulary necessary to effectively teach the concepts in the unit. Materials do not include unit overviews that provide the background content knowledge 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 students.

Evidence includes, but is not limited to:

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

- The *Math - Grade 7 (Teacher Course)* houses individual unit teacher materials. Each unit organizer shows the unit introduction, unit overview, prior learning supports, and resources. Additional PDF documents include unit documents and unit letters in English and Spanish.
- A “Prior Learning Supports” chart identifies previously learned concepts and strategies, Texas Essential Knowledge and Skills (TEKS), and English Language Proficiency Standards (ELPS) alignment, objectives, and academic vocabulary. Materials connect TEKS from previous grades with the current unit. For example, “In 5th and 6th grade, students learned how to add, subtract, multiply, and divide fractions and decimals. In 7th grade, students are expected to demonstrate both mastery and fluency with solving problems involving all four arithmetic operations on all forms of rational numbers, including fractions, decimals, and percents."-
- Each unit document provides components for effective instruction including objectives and pacing calendars. For example, the grade 7 “Unit 1” document objectives include, “I can... add and subtract rational numbers fluently, solve problems by adding and subtracting rational numbers, and multiply and divide rational numbers fluently."
- Documents list vocabulary in the unit but include no evidence of definitions or explanations. (Materials do provide these definitions at the lesson level.) Vocabulary instruction strategies are also located in the course-level materials. The *Grade 7 Mathematics Teacher’s Guide* provides a six-step process for developing academic vocabulary. For example, students "restate the example, description, and/or explanation in their own words." Students also articulate vocabulary in their own words, include examples and non-examples, and list relevant facts or characteristics. For example, the vocabulary words listed to use with the “Frayer Model” templates for “Unit 6” are the following: compound events, dependent events, independent events, probability, simple events, and theoretical probability.

- At the unit level, materials do not include evidence of pedagogical background concept knowledge necessary to teach the concepts effectively or to support generalist teachers with the foundational knowledge and implications. Details were included at the lesson level, but not the unit level.

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

- *Grade 7 Unit Teacher Materials* provide family support documents in both Spanish and English. Teachers can download editable letters and revise their content as necessary. The parent letter gives a summary of the unit. Units offer visual representations to demonstrate how students are exposed to this concept; others use written expression to describe the unit goal. In "Unit 5," parents read, "Your student will become familiar with scaling aspects of geometry and measurement."
- Parent letters provide specific strategies and activities to support student learning at home. For example, "Unit 5" guidance includes "Involve your student in hobbies that use scaling, such as radio-controlled model trains, making clothing for dolls, or painting large canvases inspired by small pictures or cartoons" and "Talk with your student about their grade 7 mathematics assignments, including discussion of what they understand and what they have questions about."
- Unit tables, printed on the letter, allow parents to track progress by providing the following columns: "Unit Activity," where lessons are listed by number and content; "Assignments," where parents chart student work for each lesson; and "Grades Earned," where parents write scores from lessons. For example, "Unit Activity" in "Unit 7" lists two lessons with titles and the unit test. Parents record activities and student scores for each lesson.

Intentional Instructional Design

1.3	Lesson-Level Design	34/34
1.3a	Materials include comprehensive, structured, detailed lesson plans that include daily objectives, questions, tasks, materials, and instructional assessments required to meet the content and language standards of the lesson.	**30/30**
1.3b	Materials include a lesson overview outlining the suggested timing for each lesson component.	**1/1**
1.3c	Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson.	**2/2**
1.3d	Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, enrichment).	**1/1**

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

Evidence includes, but is not limited to:

Materials include comprehensive, structured, detailed lesson plans that include daily objectives, questions, tasks, materials, and instructional assessments required to meet the content and language standards of the lesson.

- In *Grade 7 Mathematics Teacher Course*, each comprehensive “Lesson Overview” includes the following: a focus question, “I can” statements, Texas Essential Knowledge and Skills (TEKS), English Language Proficiency Standards (ELPS), and “Process Standards.” For example, in the “Unit 3, Lesson 1” overview, the focus question asks “How can I represent a relationship that has a constant rate of change?” The "I can" statements correspond with the learning objectives for rates, ratios, and proportions; the first statement says, "I can... determine rates of change in a table of data."
- The lesson overview explains prior learning supports, lesson planning tips, suggested time allocations for each component, teacher and student materials, and instructional assessments. For example, in “Unit 3 Lesson 1,” prior learning supports include “In 5th grade students worked with additive and multiplicative patterns.”
- The “Lesson Plan” Section of the “Lesson Overview” includes three components: “Exploration,” “Explanation,” and “Performance Task.” A “Lesson Components” table provides links to all necessary materials for each component. For example, the “Unit 3 Lesson 1” document states “Exploration: Play the instructional video to launch instruction. Guide students through the activity. Provide students with the Blackline Master of the Student Pages

or assign the Google slides as appropriate. Use the Answer Key as necessary." Links from the "Lesson Component" table include a video, the "Blackline Master (Student Page)," the "Blackline Master (Answer Key)," and Google Slides. "Exploration" also includes detailed instructional hints to support Emergent Bilingual and question stems to support productive struggle. The next section, "Explanation," begins with the following: "Assign students the ePub to provide direct instruction on the content along with guided practice through examples and a set of practice questions." The final section of the plan, "Performance Task," includes resources for instructional assessments at varying levels, as well as a unit test. "Unit 3 Lesson 1" explains, "As a formative assessment, use the performance task to determine what students know about the topic. Performance tasks have four versions: on-level, simplified, enriched, and scaffolded. Allow students to work in pairs or small groups if desired. If there are multiple performance tasks, select one or encourage self-differentiation by allowing students to select a task based on their interests and comfort levels."

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

- In the *Grade 7 Course Level Document*, each unit overview provides scheduling options for 165, 180, and 210-day calendars along with options to accommodate different scheduling needs. The unit document lists lessons that correspond to each day in a table format. For example, according to the 165-day pacing guide, "Unit 2 Lesson 1" occurs on instructional days 23–25.
- In addition, each unit provides a "Lesson Overview," which specifies a time frame for each component, allowing time for students to complete tasks. For example, in "Unit 2 Lesson 1," the allotted time for instruction is 70–85 minutes and is broken down into the following sections: "Exploration" (20-25 minutes), "Explanation and Practice" (20-25 minutes), and "Performance Task" (30-35 minutes).

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

- The *Grade 7 Mathematics Implementation Guide* provides a "Materials List," which outlines the items needed to ensure student success. Items listed include scissors, glue/tape/paste, graph paper, and counters (e.g. centimeter cubes or color tiles).
- Each grade 7 unit overview contains a link to unit documents where general materials are listed for the unit. For example, the "Unit 7" document lists materials necessary for the successful execution of the entire unit: *Grade 7 Mathematics Teacher Course*, string or ribbon, rulers, paper plates, and scissors.-
- Each "Lesson Overview" breaks down the materials list into two parts: "Teacher Materials" and "Student Materials." For example, in "Unit 7 Lesson 1," the teacher materials list says "none." However, students need pencil, paper, string, or ribbon (1 foot per student group), and rulers (1 per student group).

- In addition, the *Grade 6 Mathematics Teacher Course* lesson materials link all online resources to deliver the lesson effectively. For example, “Unit 7 Lesson 1 Exploration” links all resources referenced, including the lesson video, the activity sheet, and the answer key.

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

- The *Grade 7 Mathematics Teacher Course* provides guidance through all three major components of the lessons: “Exploration,” “Explanation,” and “Performance Task.” In the “Exploration” Section, the “Blackline Masters (Student Pages)” provide independent/small group practice as a student activity. For example, in “Unit 1 Lesson 1,” students work together and complete a Venn diagram to identify integers, rational numbers, and whole numbers. Teacher materials offer questions to support student reasoning and productive struggle through questioning by asking clarifying question(s), focusing questions, advancing questions, and assessing questions. For example, in “Unit 1 Lesson 1,” a clarifying question would be “When you say _____, what do you mean?”
- In “Explanation,” teachers use the online textbook to “provide direct instruction.” After working through sample problems in “Unit 1, Lesson 1,”, teachers "assign the practice questions to students” and “use student responses to gauge their proficiency with the content."
- Each lesson concludes with a “Performance Task,” a culminating exercise that expands upon and enhances the goals set. Each performance task includes four versions tailored to different levels of proficiency, ensuring a clear demonstration of student mastery: on-level (for proficient students), scaffolded (for somewhat proficient students), simplified (for students who are not yet proficient), and enriched (for highly proficient students). In “Unit 2 Lesson 2,” the “Performance Task” guides teachers on providing extended practice: "Differentiate tasks based on instructional assessments in the previous portions of the lesson.”
- Materials also include the *Grade 7 TEKS Companion Guide* to present “mini-lessons to supplement classroom activities and instructional tasks.” For example, “Unit 2 Lesson 4” includes a box labeled, "You try it." Within that practice box, students verify solutions of a two-step equation. The *Grade 7 TEKS Companion Guide* also includes practice problems at the end of each lesson. These problems can be used for in-class practice or homework. For example, in “Unit 2, Lesson 6,” students complete eight practice problems after finishing the guided lesson.

Progress Monitoring

2.1	Instructional Assessments	18/24
2.1a	Materials include a variety of instructional assessments at the unit and lesson level (including diagnostic, formative, and summative) that vary in types of tasks and questions.	**8/12**
2.1b	Materials include the definition and intended purpose for the types of instructional assessments included.	**2/2**
2.1c	Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments.	**2/2**
2.1d	Diagnostic, formative, and summative assessments are aligned to the TEKS and objectives of the course, unit, or lesson.	**4/6**
2.1e	Instructional assessments include standards-aligned items at varying levels of complexity.	**2/2**

The materials include a variety of instructional assessments at the unit and lesson level (including formative and summative) that vary in types of tasks and questions. The materials do not include diagnostic assessments at the unit and lesson level that vary in types of tasks and questions.. Materials include the definition and intended purpose for the types of instructional assessments included. Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments. Formative and summative assessments are aligned to the TEKS and objectives of the course, unit, or lesson. Diagnostic assessments are not aligned to the TEKS and objectives of the course, unit, or lesson. Instructional assessments 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.

- The *Grade 7 Mathematics Assessment Guide* explains two types of assessment provided to teachers. A table informs teachers about lesson-level formative and unit-level summative assessments within the curriculum. The table describes the definition of each assessment, its purpose, administration guidance, and examples.
- For example, the purpose of the lesson-level assessment is to “provide teachers with feedback to make instructional decisions for the remainder of the lesson and/or next lesson.” Examples of lesson-level formative assessments include "Blackline Master” PDFs, “ePub” interactive questions, and “Performance Tasks." Lesson-level formative assessments are found in the “Exploration,” “Explanation,” and “Performance Task” portions of each lesson. One example from “Unit 3, Lesson 1” “Exploration Blackline Master Rates of Change” provides tables of values for students to determine rates of change. Next, students read a table and then answer questions. The last questions ask students to “make a scatterplot of data in each table” and answer questions about the scatterplots.

- In “Unit 2, Lesson 1” “Explanation,” the “Assessment Strategies” Section guides teachers to monitor formative assessments: “Assign the practice questions to students. Use student responses to gauge their proficiency with the content."
- In “Unit 2, Lesson 1,” the “Performance Task” engages students in *Equations and Inequalities: Maria’s Picture Puzzle* as they solve four equation puzzles. The levels of differentiation for this particular task, which allow students to demonstrate mastery at an equitable level, include simplified task (for students who are not proficient), scaffolded task (for somewhat proficient students), on-level task (for proficient students), and enriching task (for highly proficient students).
- In the *Grade 7 Mathematics Teacher Course*, an “End of Unit Assessment” serves as a tool for educators to conduct summative evaluations. For example, the “Unit 2” “End of Unit Assessment” contains multiple-choice and short answers (like fill-in-the-blank). For example, question 6 asks "What is the value of x in the equation? 5x + 24 = –36." End-of-unit assessments provide no evidence of diverse question formats such as multi-select, drag-and-drop, or hot spots.
- Materials offer a digital platform with an item bank of practice problems, including single-choice, multiple-choice, ordering, association, fill-in-the-blanks, fill-in-the-blanks with dropdown, fill-in-the-blanks with drag-and-drop, descriptive, comprehension, audio recording, drawing, drag-drop image, and situational judgment."
- The *Grade 7 Mathematics Assessment Guide* provides no evidence of diagnostic assessments.

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

- In the *Grade 7 Mathematics Assessment Guide*, documents explain two types of assessments provided to teachers: "lesson-level formative and unit-level summative." Materials provide definitions of each along with their purpose of providing baseline data regarding a student’s foundational knowledge or proficiency. Materials also provide administration guidance: pinpointing misconceptions, assessing progress, and steering instructional choices.
- The lesson-level formative assessment, defined as an "assessment during the lesson (consistently during the lesson)," provides teachers with “feedback to make instructional decisions for the remainder of the lesson and/or next lesson."
- The summative assessment, defined as an "assessment at the end of the unit of instruction (once per unit)," allows students “to demonstrate mastery of learning objectives."
- The *Grade 7 Mathematics Assessment Guide* provides no evidence of diagnostic assessments.

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

- The *Grade 7 Mathematics Pacing Guide* provides recommendations regarding the time allocated for completing assessments and suggestions for dividing lengthy assessments into multiple sessions across days or class periods. For example, in the 180-day calendar, the "Unit 4 Test" is given on Day 80, whereas the "First Semester Summative Assessment" requires two days: Days 88 and 89. The "Unit 1" document provides a "Time allotments for lesson pacing" table, which suggests allowing 45–90 minutes per unit test.
- The *Grade 7 Mathematics Assessment Guide* includes guidance for both lesson-level formative and unit-level summative assessments with the following information: assessment type, purpose, administration guidance, and examples and formats. The lesson-level formative administration guidance recommends teachers "follow directions in lesson plans for group or individual administration." The unit-level summative assessment administration guidance states "individual; on paper or digitally at the teacher's discretion."
- The *Grade 7 Mathematics Assessment Guide* explains how to interpret student responses. It guides teachers by stating "For multiple-choice items answered incorrectly, determine whether the distracter chosen represents a misconception, calculation error, or indicates guessing. For free-response items, awarding partial credit is recommended. Determine at what point in the solution process the student's error occurred and award credit for correct thinking in process."
- Each grade 7 "Unit Lesson" incorporates a performance task to ensure consistency and standardization in administration among students. In the lesson plan overview, performance guidance for teachers suggests "If there are multiple performance tasks, select one or encourage self-differentiation by allowing students to select a task based on their interests and comfort levels." For example, in "Unit 8. Lesson 3," proficient students should receive the "on-level task," and students who are not yet proficient should receive the "simplified task."

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

- The *Grade 7 Mathematics Teacher Course* lists TEKS assessments, providing the lesson number, lesson title, Texas Essential Knowledge and Skills (TEKS), and English Proficiency Standards (ELPS). This format is consistent across the entire *Math – Grade 7 Course*. For example, in "Unit 3 Teacher Materials," the table lists "Lessons 1 through 5." "Lessons 1 and 2" cover student expectation 7.4A. "Lesson 3" addresses 7.4B; "Lesson 4" includes 7.4D, and "Lesson 5" addresses 7.4E. Then, the "Unit Test" lists all TEKS in the unit from each lesson.
- The *Grade 7 Mathematics Assessment Guide* affirms that every "formative assessment in the Exploration, Explanation, and Performance Task portions of the lesson are aligned to the TEKS of the lesson." Each lesson overview demonstrates this alignment in the "Texas Essential Knowledge and Skills (TEKS)" table. For instance, within the "Exploration" component of "Unit 7, Lesson 1," materials list TEKS 7.5B, 7.8C, and 7.1G.

- The “Unit Lessons” provide “Blackline Masters” for each “Exploration” portion of the lesson, which are aligned to lesson objectives. For example, in “Unit 3, Lesson 1” the “Blackline Master” gives students various modalities for working on 7.4A.
- According to the *Grade 7 Mathematics Assessment Guide*, educators can utilize the “ePubs” (the online platform) for interactive lesson components aligned with the TEKS standards, whether for formative or summative purposes. In “Unit 3, Lesson 1” “Explanation,” materials provide a “Student-centered Learning Option” link, which opens the online *TEKS Companion Guide* and addresses student expectation 7.4A. The information provided shows “Tell Me More” which includes a detailed explanation and related vocabulary, two examples, and eleven practice problems.
- The TEKS in the “Performance Task”) align to those listed in the unit and lesson materials. For example, “Unit 3, Lesson 1” provides the “7.4A Performance Task” *Cycling Club*.
- Materials provide unit answer keys for each unit assessment, which include “detailed answers including TEKS alignment of all assessment items." The table for each answer key includes the following information: “Item Number,” “Reporting Category,” “Readiness or Supporting,” “Content/Student Expectation,” “Process Student Expectation,” and “Correct Answer.” For example, the “Unit 3 Test Answer Key” shows item number one is a supporting standard for content student expectation 7.4A and process student expectation 7.1D.
- Materials do not provide diagnostic assessments.

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

- The *Grade 7 Mathematics Assessment Guide* explains "The Performance Task section of each lesson provides a differentiated rich task for students based on their readiness as demonstrated in the Exploration and Explanation portions of the lesson and any previous lessons related to the learning of the current lesson." These tasks allow students to complete standards-aligned items at various levels of complexity based on their readiness: simplified task (for students who are not proficient), scaffolded task (for somewhat proficient students), on-level task (for proficient students), and enriched task (for highly proficient students). Materials provide no evidence of depth of knowledge or levels of complexity other than the four versions of the “Performance Task.”
- The assessments provided after each grade 7 unit present a summative evaluation that comprises multiple-choice, text entry, or open-response questions designed to follow the standards. For example, the “Unit 2 Test” includes fifteen multiple-choice questions and three open-ended response questions. Assessment scoring and item analysis information provide the teacher with additional information to determine the next steps to move each student toward mastery of learning objectives. For instance, it specifies that in the case of incorrectly answered multiple-choice questions, the aim is to ascertain whether the selected distractor signifies a misconception, computational mistake, or a random guess.
- The *Grade 7 Mathematics Assessment Guide* explains different assessment item types contained within the curriculum’s digital platform, which allows teachers to use a variety of question types that go beyond multiple-choice: single-choice, ordering, association, match the following, fill-in-the-blank (also with dropdown and drag-and-drop), descriptive,

comprehension, audio recording, drawing, drag-drop image, and situational judgment. Materials allow teachers to create assessments using an online item bank.

Progress Monitoring

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

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

Evidence includes, but is not limited to:

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

- The *Grade 7 Mathematics Assessment Guide* states “For multiple-choice items answered incorrectly, determine whether the distracter chosen represents a misconception, calculation error, or indicates guessing. For free-response items, awarding partial credit is recommended. Determine at what point in the solution process the student’s error occurred and award credit for correct thinking in the process.” The guide prompts teachers to ask "Did the student master TEKS by answering the vast majority of questions aligned to the TEKS correctly? What pattern(s) do you see in their incorrect answers?"
- “Performance Tasks” provide guidance for interpreting and responding to students and provide the teacher with additional information to determine the next steps to move each student toward mastery of learning objectives. Materials prompt teachers to interpret student responses by offering a "Look For . . ." Section. For example, in the “7.4A Performance Task” *Cycling Club* in “Unit 3, Lesson 1,” teachers look for “proficiency with rational number operations.” Teachers also look for “correct computations of rate for each rider and correct comparisons for ordering values" and “student justification of choices of solution strategy." The *Grade 7 Mathematics Teacher Guide* includes the section “Providing Students Effective Feedback (Wiliam, 2011),” which encourages teachers to provide feedback that “supports students’ productive struggle– not remove it.” Feedback "should focus on a specific task, rather than the student, and provide ways to improve.” The *Grade 7 Mathematics Teacher Guide* also includes a bulleted list of common misconceptions to look for in grade 7 math students.

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

- In the *Math - Grade 7 (Teacher Course)*, materials provide lesson narratives for the "Exploration" and "Explanation" components that include guidance on how to respond when students are struggling or succeeding with the material. For example, in "Unit 1, Lesson 3" "Exploration," teachers "play the instructional video to launch instruction, guide students through the activity, provide students with the Blackline Master of the Student Pages or assign the Google Slides as appropriate, and use the Answer Key as necessary." The "Exploration" guidance provides questions to support students' reasoning and instructional hints for content mastery. In the "Explanation" component, teachers "allow time for students to read Tell Me More section and examples 2 and 3." This section includes the following: "Student-Centered Learning Options," "Explicit Instruction Options," and "Instructional Hints." For example, "Unit 2, Lesson 1" materials include the instructional hint "Emphasize the connections between a concrete model (cups and counters), pictorial model (strip diagram), and properties of operations that justify the steps taken to solve an equation. The additive inverse allows you to add the opposite of a number to generate 0. Adding 0 to any side of the equation does not change its value."-
- Teachers are further guided to use the answers to class discussions and work to assign a leveled performance task to the students based on their understanding. Levels include simplified tasks (used for students who are not yet proficient), scaffolded tasks (used for somewhat proficient students), on-level tasks (used for proficient students), or enriching tasks (used for highly proficient students). Students work in pairs or small groups to select a task based on their interests and comfort levels. "Performance Task" materials include a bulleted "Look for . . ." list to guide teachers in providing feedback. In the "Unit 2, Lesson 1" "Performance Task," teachers look for "a solution strategy to write and solve equations that represent each line of the puzzle in order to find the value for each animal in the puzzle and the final result of the problem on the last line."
- The *Grade 7 Mathematics Teacher Guide* contains a "Unit Internalization Protocol" and a "Lesson Internalization Protocol." These protocols each consist of three segments: Read through digital pages and make notes, connect information to culminating tasks, and anticipate where students may need support. Teachers address student performance on assessments, identify levels of proficiency, and process information about student strengths, weaknesses, gaps, and common misconceptions. Materials challenge teachers to decide "What will you do when students already know what you will be teaching? What will you do when students have difficulty learning?"

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

- The *Grade 7 Mathematics Assessment Guide* provides a "Progress Tracking Tool," which lists all the TEKS for grade 7 and gives five opportunities for students to track their assignment scores for each student expectation. Then, students calculate an overall progress number. Materials instruct students to use this tracking tool weekly to monitor progress toward mastering grade 7 mathematics goals. On the last page of the "Progress Tracking Tool,"

students write their strengths, what they are currently tracking, and their next goal. “Students can use this digital platform to keep track of their progress if their teacher chooses to use digital assignments exclusively.”

Supports for All Learners

3.1	Differentiation and Scaffolds	8/8
3.1a	Materials include teacher guidance for differentiated instruction, activities, and/or paired (scaffolded) lessons for students who have not yet reached proficiency on grade-level content and skills.	**3/3**
3.2b	Materials include pre-teaching or embedded supports for unfamiliar vocabulary and references in text (e.g., figurative language, idioms, academic language). (T/S)	**2/2**
3.1c	Materials include teacher guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.	**3/3**

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

Evidence includes, but is not limited to:

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

- In *Math - Grade 7 (Teacher Course)*, lesson-level materials guide teachers in assigning "Performance Tasks," designed for students to reinforce their mastery of lesson content. Materials "differentiate tasks based on instructional assessments in the previous portions of the lesson," and the "Performance Tasks" differentiate instruction for varying levels of difficulty. For example, each task provides four versions: simplified (for students who are not yet proficient), scaffolded (for somewhat proficient students), on-level (for proficient students), and enriched (for highly proficient students). In simplified and scaffolded tasks, students complete fewer questions and activities with the same data or problem. For example, in "Unit 4, Lesson 1," the on-level task presents students with four different cars with different tank sizes and gas mileage per tank. On-level students put the cars in order based on their constant of proportionality and determine which car is best if the customer wants to get 24 miles per gallon. The simplified task asks for each car's constant of proportionality and the value's meaning, which students use to determine and justify the car best for the customer. The scaffolded task provides guided steps before the on-level questions, "How is the constant of proportionality found for a car to relate total miles driven on a tank of gas to the gas tank size?" Embedded in the "Performance Task" "Teacher Guidelines," materials provide teaching methods, including visual aids and manipulatives, to aid students still working towards achieving proficiency in skills expected at their grade level.

- In every lesson, materials include the "Exploration" and "Explanation" Sections with two types of guiding questions teachers ask students: "Clarifying Questions" and "Focusing Questions." These questions support teachers in scaffolding student learning, enrichment, and quick assessments. For example, questions support students by having them clarify their thinking and work through problems with the teacher. Guidance in the "Unit 4, Lesson 1" "Exploration" Section suggests asking students who have not yet reached proficiency a "Clarifying Question" such as, "When you say _____, what do you mean?" The "Focusing Questions" ask, "What is this problem about? How do you see the table changing from row to row?" In the "Unit 4, Lesson 2" "Exploration" Section, teachers ask on-level students "What pattern(s) do you notice in the table?"
- The *Grade 7 Mathematics Teacher's Guide* includes a lesson internalization protocol with a section for teachers to anticipate where students may struggle and think through a plan to support students who have not yet reached proficiency. It states, "Anticipate where students may need support. As you read through the lesson information, these may include parts of the lesson with a heavy reading load, practice problems that surprised you (for which students will need background knowledge or require more thinking than usual before you could answer), and learning mentioned in the unit overview that requires students to connect processes to concepts and skills." Materials also prompt teachers with questions during planning such as, "What student support themes emerge in your notes about the lesson? How will you provide just-in-time support for students while teaching this lesson at the level of the TEKS for grade 7 mathematics?" Materials include in-class differentiation for students who have not mastered the content, stating, "Use the mini-lesson in the Grade 7 Math TEKS Companion Guide for that TEKS/SE as an intervention or reteach activity."

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

- The *Grade 7 Mathematics Teacher Guide* provides vocabulary instruction with explicit steps. Each "Lesson Overview" instructs teachers to "introduce the new term(s) by providing a student-friendly example, description, and/or explanation." Students restate the example, description, and/or explanation in their own words and create a non-linguistic representation of the term(s). Materials guide teachers to "engage students periodically in activities that deepen their understanding of the term(s)," to "involve students in discourse during which they discuss the term(s) with one another," and to "involve students periodically in games that allow them to play with the term(s)."
- The *Grade 7 Mathematics Teacher Guide* "Lesson Overviews" suggest, "One way to support students' acquisition of new vocabulary terms is to pre-teach the vocabulary terms using a strategy such as a Frayer model." Each vocabulary word links to a printable Frayer model template, partially filled out, to assist students in enhancing their comprehension of the vocabulary. A blank Frayer Model template is also supplied to document any additional terminology students encounter during the unit.
- Materials include pre-teaching or embedded supports for unfamiliar vocabulary and in-text references. For example, the "Tell Me More" Section for TEKS 7.4B includes definitions of these

academic terms: *ratio*, *rate*, and *unit rate*. Additionally, teachers are encouraged to have students develop their own definitions and draw pictures, and, as an additional embedded support, the *Grade 7 TEKS Companion Guide* "provides a personal glossary at the end of the book where students can build their own illustrated glossary of terms."

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

- In *Math - Grade 7 (Teacher Course)*, lesson-level materials guide teachers in assigning "Performance Tasks," designed to conclude with an enrichment or extension task, typically project-based learning; research projects; or creative assignments, to reinforce mastery of lesson content. Materials "differentiate tasks based on instructional assessments in the previous portions of the lesson," and "Performance Tasks" differentiate instruction for varying levels of difficulty. For example, materials provide two versions for students who have already demonstrated proficiency: on-level (for proficient students), and enriched (for highly proficient students). Each task has more rigorous questions and activities for students to complete with the same data/problem given at all performance levels. For example in "Unit 4, Lesson 1," the on-level task asks students to put cars in order based on their constant of proportionality of tank size to mileage and determine which car is best if the customer wants to get 24 miles per gallon. The enrichment task adds additional questions such as, "What percent increase in the number of miles per tank must he be able to get from each car he is interested in to achieve this objective? Which car is closest to meeting this number and by how much? Justify your reasoning."
- In *Math- Grade 7 (Teacher Course)*, each lesson has an "Explanation" Section and an "Exploration" Section that provide questioning strategies to "support student reasoning and productive struggle." Within each section, there are four types of questions and one is focused on "Advancing Questions (ask and walk away)," included to enhance critical thinking skills and encourage independent exploration. For example, guidance in the "Unit 4, Lesson 1" "Exploration" Section nudges students by asking, "If you know how the table changes, how can you determine the next value? How does knowing how the table changes help you find the constant of proportionality?" In the "Explanation" Section of the same lesson, the "Advancing Question" asks, "What does the rate of change look like in a table? What does the rate of change look like in a graph?"
- Materials provide "Enrich/Extend" days scheduled in the 180-day and 210-day pacing guides and "Enrichment and Extension" days in each unit. For example, in the "Unit 6 Overview," a table shows the TEKS associated with each lesson. After the unit test, materials list the lesson as "Enrichment and Extension" but provide no additional information. In the pacing guide, materials suggest topics but provide no specific instruction. For example, after the "Unit 6" test, the 210-day pacing guide provides three "Extend/Enrich" days that address similar figures but provide no explicit instruction.

Supports for All Learners

3.2	Instructional Methods	13/13
3.2a	Materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly).	**6/6**
3.2b	Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches.	**4/4**
3.2c	Materials support multiple types of practice (e.g., guided, independent, collaborative) and include guidance for teachers and recommended structures (e.g., whole group, small group, individual) to support effective implementation.	**3/3**

The materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly). Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches. 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.

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 *Math - Grade 7 (Teacher Course)* materials include "Teaching Hints" with prompts and guidance that aid in communicating the concept. For example, in "Unit 7, Lesson 2" the materials state, "Because reference materials such as the Grade 7 STAAR® Reference Materials are readily available, de-emphasize memorizing area formulas. Instead, show students how to use reference materials, including online search engines and websites, to locate the formulas they need and use those to solve problems." Materials use "Teaching Hints" to provide teacher guidance for modeling using concrete images. The "Unit 5, Lesson 2" "Teaching Hints" explain, "A key problem-solving strategy is to draw a diagram. If students encounter a verbal description of a problem situation involving scale drawings or scale factors, have students draw a picture of what the problem describes." In "Unit 3 Lesson 2," the "Teaching Hints" suggest the teacher model the concept using "Cuisenaire® or proportionality rods to help students translate proportional relationships from a verbal description to a numeric or tabular representation."
- The *Math - Grade 7 (Teacher Course)* provides "Lesson Overviews" that divide each lesson into three components: "Exploration" and "Explanation" Sections and "Performance Tasks." Materials direct teachers to see subsections for lesson components and provide links that connect to teacher guidance. In the "Unit 5, Lesson 2" "Exploration" Section, materials include teacher guidance in the "Blackline Master" to facilitate independent practice and evaluate student comprehension before the performance assessment. Materials provide questions to ask students that "support student reasoning and productive struggle." For example, the "Clarifying Question" asks, "When you say _____, what do you mean?" and the "Focusing

Question" asks, "What is this problem about?" Materials instruct teachers to ask "Advancing Questions (ask and walk away)" such as, "What relationship do you see in the ratio of the corresponding measurements? If you know the scale factor, how can you use it to find the missing lengths? If you know the measurements of both figures, how can you find the scale factor?" Then, to check understanding, materials include "Assessing Questions" such as, "What do you think scale factor means? What does scale factor have to do with similar figures?"

- The *Grade 7 Mathematics* "ePub" provides a range of illustrated examples, segments for students to engage actively, and sets of practice exercises. For example, within "Unit 7, Lesson 2," materials explain four diverse examples of varying question types and levels of conceptual comprehension followed by a segment comprising ten practice problems.

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

- The *Math - Grade 7 (Teacher Course)* provides "Unit Overviews" with detailed introductions and summaries. Materials explain the interconnectedness between the current unit's learning objectives and the preceding and subsequent learning modules. Furthermore, it furnishes practical applications derived from previous lessons, providing teacher guidance for the instructional delivery to improve student comprehension. For example, the "Unit 6 Overview" states, "This unit is students' first experience with probability as a ratio of the number of desired outcomes to the number of total outcomes. Because probability is often represented as a fraction (part-to-whole ratio where the part is the number of desired outcomes and the whole is the number of total outcomes), fluency with adding, subtracting, and multiplying fractions is useful in calculating compound probabilities or complementary probability in a variety of contexts."
- The *Math - Grade 7 (Teacher Course)* provides "Lesson Overviews" that divide each lesson into three components: "Exploration" and "Explanation" Sections and "Performance Tasks." Each lesson starts with the "Exploration" Section, which links to a video, activity, and accompanying slideshow. Videos showcase practical scenarios, demonstrate problem-solving techniques, and allow time for journal responses. For example, the "Exploration" Section's instructions from "Unit 4, Lesson 2" state, "Facilitate student group exploration and reflection. Instructional Hint: Consider what defines a linear relationship what defines a proportional relationship and how to help students navigate their similarities and differences. Connect new learning to learning in a previous grade level about additive and multiplicative relationships. Proportional relationships are multiplicative. Linear relationships involve elements of both additive and multiplicative relationships and are an overarching category into which proportional relationships fall." The "Explanation" Section contains an "ePub" (online textbook) that offers students step-by-step solutions to multiple examples and exercises for application with explicit instructions and teacher guidance. For example, the "Unit 5, Lesson 1" "Explanation" Section includes two comprehensive worked-out examples in "ePub," and instructions provide a "Student-Centered Learning Option" which states, "Allow time for students to read the Tell Me More and Example 3. As needed, support student reasoning and

productive struggle through questioning. Bring students back together as a whole group to debrief the content and examples." In the "Formative Assessment" Section, teachers assign practice questions and examine student responses to gauge their proficiency. Next, a "Performance Task" is offered for each lesson with four varying levels with guidance on assigning them or allowing students to select a task based on their interests.

- *Grade 7 Course Level Documents* contain a problem-solving template that offers teacher guidance and recommendations for facilitating effective lessons to engage students in problem-solving, reasoning, and sense-making. The template includes two versions: one with guiding questions and one that is blank. Each template provides six sections: "Analyze," "Formulate," "Determine," "Justify," "Evaluate (reasonableness)," and "Evaluate (process)." On the blank template, for example, the first section reads, "Analyze the given information." On the narrative template, the first section reads, "Analyze the given information" and includes guiding questions that focus student attention on the actions, operations, and information from the problem.

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.

- Each "Unit Exploration" lesson contains an instructional video where students engage in independent and group work to analyze and reflect on new concepts using the coordinating "Blackline Master." In the "Unit 5, Lesson 1" "Exploration" Section, teachers facilitate student exploration and reflection by grouping "students in a visibly random way (e.g. playing cards, drawing straws, spinner, etc.) into groups no larger than three students per group."
- In the "Explanation" Section, students link to an "ePub" document that provides guided practice via worked-out examples with step-by-step explanations and practice problems. Materials provide a "Student-Centered Learning Option," where teachers allow time for students to read through materials and "as needed, support student reasoning and productive struggle through questioning." Then, teachers "bring students back together as a whole group to debrief the content and examples." Another alternative is an "Explicit Instruction Option," where teachers lead students through each of the same components of the "ePub." To conclude the lesson, teachers assign practice questions and analyze responses to determine proficiency.
- In *Math - Grade 7 (Teacher Course)*, lesson-level materials guide teachers in assigning "Performance Tasks," designed to conclude with an enrichment or extension task, typically project-based learning; research projects; or creative assignments, to reinforce mastery of lesson content. Teacher guidance suggests that "Performance Tasks" be collaborative work, as materials state, "Allow students to work in pairs or small groups if desired." Materials provide four versions of proficiency, and each task has questions and activities for students to complete with the same data/problem given at all performance levels. Each of the tasks provides teacher guidance and structure for effective implementation. In the "Unit 5, Lesson 2" "Performance Task," "Statue of Liberty," guidance includes asking students to use operations, proportions, ratio tables, or any other appropriate model. Additionally, teacher

guidance indicates allowing students to work in any order and use any strategy for organizing information.

Supports for All Learners

3.3	Supports for Emergent Bilingual Students	11/11
3.3a	Materials include teacher guidance on providing linguistic accommodations for various levels of language proficiency [as defined by the English Language Proficiency Standards (ELPS)], which are designed to engage students in using increasingly more academic language.	**2/2**
3.3b	Materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs.	**1/1**
3.3c	Materials include embedded guidance for teachers to support emergent bilingual students in developing academic vocabulary, increasing comprehension, building background knowledge, and making cross-linguistic connections through oral and written discourse.	**8/8**
3.3d	If designed for dual language immersion (DLI) programs, materials include resources that outline opportunities to address metalinguistic transfer from English to the partner language.	**Not scored**

The 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.

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.

- *Math - Grade 7 (Teacher Course)* materials include "Guiding Principles to Support Emergent Bilinguals," which suggests "planning multimodal lessons that grow students' listening, speaking, reading, and writing skills as they acquire more complex English language." In addition, each lesson is "aligned to at least one ELPS" and offers various supports to help Emergent bilingual students effectively build and enhance their academic content knowledge through oral communication.
- Materials instruct teachers to place "emergent bilinguals in small groups with their peers" and provide "a safe environment for them to sharpen their skills using the English language while they are learning about mathematics." In the "Unit 4, Lesson 1" "Exploration" Section, teachers "engage students in a class discussion where they speak using grade-level content area vocabulary in the context of proportional relationships to internalize new English words."

In "Unit 5, Lesson 2," students watch the video, listening for high-frequency words. Next, work in pairs "using the high-frequency words to tell their partner what they saw and heard."

- Each "Exploration" Section contains teacher guidance on supporting Emergent bilingual students with vocabulary and sentence stem suggestions. "Unit 3, Lesson 5" scaffolds guidance specific to the content taught for Beginner, Intermediate, Advanced, and Advanced High levels. For example, for students who are Beginners, teachers are instructed to "Ask students to draw their response to a reflective journal entry prompt such as, "How does the size of a liter compare to the size of a quart? Explain your response." In "Unit 5, Lesson 1," students engage in conversations using the following sentence stems: "A new word or phrase I heard was... One new word or phrase I used was... An important academic vocabulary term I heard was..." In the "Unit 4, Lesson 1" "Exploration" Section, students "narrate, describe, and explain what they know about equivalent expressions with increasing specificity and detail" as question scaffolds provide student direction; for instance, "What is a common characteristic in proportional relationships? If a constant of proportionality is 5, what does that tell you about the proportional relationship?"
- The *Grade 7 Mathematics Teachers Guide* includes a six-step process for building academic vocabulary. These steps guide Emergent bilingual students to improve their writing and speaking. For instance, in the second step, students are urged to explain content "using their own words." The fifth step promotes discussing new vocabulary with peers. Materials also provide Frayer models hyperlinked to lesson vocabulary terms.
- The *Grade 7 Mathematics Teacher's Guide* includes "Guidance for Teachers to Provide Linguistic Accommodations and Support Emergent Bilinguals," which explains that "differentiated supports are required to effectively support and engage students in the use of increasingly more academic language." A table that contains four levels of language proficiency (Beginning, Intermediate, Advanced, and Advanced High) explains actions for teachers in each of the four domains of language acquisition (Listening, Speaking, Reading, and Writing). For example, if a student is at the Beginning level for speaking, materials suggest "Make use of visuals in connection with spoken academic vocabulary."

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

- Materials provide "Guiding Principles to Support Emergent Bilinguals" which suggests, "planning multimodal lessons that grow students' listening, speaking, reading, and writing skills as students acquire more complex English language." For example, in "Support for Emergent Learners" from "Unit 1, Lesson 5," teachers "use a strategy such as a KWL Chart to activate students' prior knowledge to help them better understand meanings in English." Teachers are also encouraged to provide "linguistically accommodated material for Emergent Bilinguals to read." One suggested example is a graphic organizer; another suggests copying a portion of the "Tell Me More" Section and simplifying the language, creating shorter sentences to make the text more digestible. Each "Lesson Overview" also details corresponding ELPS and their processes included in that particular lesson. For example, in the "Unit 6" "Lesson 1 Overview," targeted ELPS include "1.D Cross-curricular second language acquisition/learning

strategies." Students speak using learning strategies such as requesting assistance, employing non-verbal cues, and using synonyms and circumlocution (conveying ideas by defining or describing when exact English words are not known).

- *Math - Grade 7 (Teacher Course)* includes a scope and sequence that aligns to the TEKS and ELPS, specifically ELPS standards connected to each lesson. Every lesson "aligns with at least one ELPS" and provides different forms of assistance to help Emergent bilingual students develop and improve their understanding of academic content through verbal, written, and reading formats. For example, in "Unit 4, Lesson 1," the aligned ELPS is 3.D.
- Each "Lesson Overview" details corresponding ELPS with processes included in that particular lesson. For example, in the "Unit 6" "Lesson 1 Overview," targeted ELPS include "1.D Cross-curricular second language acquisition/reading." No matter the stage of English language acquisition, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's English language proficiency level. Students speak using learning strategies: requesting assistance, employing non-verbal cues, and using synonyms and circumlocution (conveying ideas by defining or describing when exact English words are not known).

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.

- *Math - Grade 7 (Teacher Course)* materials include instructions in each lesson's "Exploration" Section and "Support for Emergent Bilingual Students," which empower students to develop the background knowledge needed to comprehend increasingly challenging language. Supports allow students to expand and internalize English vocabulary by engaging in classroom communication with the teacher and their peers. For example, in "Unit 3, Lesson 5," scaffolded guidance specifies the content taught for Beginner, Intermediate, Advanced, and Advanced High. Also, below the leveled guidance, a general table of cognates gives instructions: "Use Spanish-English cognates to foster student cross-linguistic connections in oral and written mathematical discourse and increase comprehension of metric and customary measurement systems." One example of the given cognates is for capacity: *milliliter* (English) and *mililitro* (Spanish).
- In the "Unit 6, Lesson 4" "Exploration" Section, students work in small groups with their peers, providing a safe environment to discuss theoretical probability. Sentence stems focus on connecting words guiding students to bridge big ideas. These include: "____ is equal to ____" and "____ differs from ____ in that ____." In the "Unit 7, Lesson 1" "Exploration" Section, sentence frames include, "Will you please explain what ____ means? Why does the text have...?"
  The *Grade 7 Mathematics Teacher Guide* explains "to support students' acquisition of new vocabulary terms, preteach the vocabulary terms using a strategy such as a Frayer model." Materials provide access to partially completed templates of the Frayer model and blank templates. Students visit previously learned vocabulary and concepts, complete a six-step routine to improve retention through spoken and written communication, and develop

academic vocabulary. Steps are as follows: the teacher introduces the new term with a student-friendly explanation; students restate the term in their own words; students create a non-linguistic representation of the term; students participate in vocabulary enrichment activities; students discuss the term with one another; and students play games with the term.

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

- This product is not listed for dual language immersion programs, but it assists Emergent bilingual students without targeted language proficiency levels. In each lesson, materials provide opportunities for students to increase comprehension and use academic vocabulary as they express opinions, scaffolded with sentence stems. For example, "Unit 7, Lesson 1" provides students with the following supports: "Will you please explain what ____ means?" and "Why does the text have...?"
- Materials include resources to support Emergent bilingual students in each "Unit Document," which lists and details related English Language Proficiency Standards (ELPS) found in the unit. For example, the grade 7 "Unit 1 Document" lists ELPS 3.E (Cross-curricular second language acquisition/speaking). Next, materials include details of this standard and strategies to develop it in all content areas, concluding with, "the student is expected to share information in cooperative learning interactions." Materials include exercises using videos and audio to help students enhance their understanding of language structure and improve their speaking abilities in two languages: English and Spanish. The materials also provide a link and guidance for utilizing resources on the Texas Education Agency's website to support Emergent bilingual students.
- The *Grade 7 Mathematics Teacher Guide* provides a six-step routine to improve retention through spoken and written communication and develop academic vocabulary. Steps are as follows: the teacher introduces the new term with a student-friendly explanation, students restate the term in their own words, students then create a non-linguistic representation of the term, students participate in vocabulary enrichment activities, students discuss the term with one another, and students play games with the term. Within each lesson overview, Frayer model templates provide support to develop academic vocabulary.

Depth and Coherence of Key Concepts

4.1	Depth of Key Concepts	3/3
4.1a	Practice opportunities over the course of a lesson and/or unit (including instructional assessments) require students to demonstrate depth of understanding aligned to the TEKS.	**1/1**
4.1b	Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.	**2/2**

The materials offer practice opportunities over the course of a lesson and/or unit (including instructional assessments) that 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.

- In *Math - Grade 7 (Teacher Course)*, resources provide opportunities and challenges to demonstrate depth of understanding to the TEKS, incorporating tangible examples. For instance, "Unit 7, Lesson 1" addresses Texas Essential Knowledge and Skills (TEKS) for applying proportions in problem situations, which is TEKS7.5B. The lesson prompts students to analyze two circles and establish connections: "How are these two parts of the circle related?" and "How might a formula be useful in this situation?"
- The *Math - Grade 7 (Teacher Course)* provides practice opportunities that scaffold mathematical contexts to more in-depth understandings and require students to solve real-world problems. For example, questions in the "Unit 7, Lesson 1" "Exploration" Section begin with students labeling and measuring parts of a circle in a mathematical context. The questions increase in rigor by asking for explanations of relationships between radius and diameter, diameter and circumference, and radius and circumference. Depth of understanding matches the expectation of TEKS standard 7.5B, describing π as the ratio of the circumference of a circle to its diameter. The second part of each lesson, the "Explanation" Section, moves students to analyze real-world examples, which model step-by-step solutions. Materials move from a mathematical context to problems arising from society, the workplace, and everyday life. For example, in the activity within the "Unit 7, Lesson 1" "Exploration" Section, students label and measure parts of a circle: "What is the approximate circumference of a pie that has a diameter of 9 inches?" Then, students analyze problems like "Which of the following tables correctly shows the relationship between the circumference and the diameter of a circle?" Depth of understanding matches the expectation of TEKS standard 7.5B, describing π as the ratio of the circumference of a circle to its diameter.
- Materials consist of a variety of evaluations that showcase students' comprehension at the level of understanding following the TEKS. "Performance Tasks" within each lesson require students to demonstrate depth of understanding by having students justify their answers. For

example, in the "Unit 5, Lesson 1" "Performance Task," students are asked "What is the ratio of the side lengths between each pair of flowerbeds? What is the minimum amount of framing material they will need to build the frames of the flowerbeds? Justify your reasoning."

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

- To increase rigor and complexity in each unit lesson, embedded questions promote a strategic progression of learning where new understanding is built on previous foundations. Each lesson is set up to go through three phases: the "Exploration" and "Explanation" Sections, and "Performance Tasks." For example, in the "Unit 8, Lesson 1" "Exploration" Section, students use nets to calculate surface area, connecting their understanding to the algorithm. Debriefing questions include: "How was the surface area of each solid figure determined?" Teachers encourage students to use pictures as references during their discussion. In the "Unit 8, Lesson 2" "Exploration" Section, students calculate the volume of rectangular prisms and pyramids. Materials instruct students to "identify the shape and formula. Then, determine the area of the base and the volume of the figure." In the "Explanation" Section, more rigorous questions demand increased complexity: "The volume of a rectangular pyramid is 125 cubic centimeters. What is the volume of a rectangular prism having a congruent base and the same height?"
- Materials provide students options for on-level practice, progressing to proficiency in the TEKS and/or beyond. Task options include simplified, scaffolded, on-level, and enriching; all tasks provide scaffolded questions to guide student success. For example, the "Unit 7, Lesson 2" "Performance Task" begins with a recall/remember question: "What is the formula for the area of a circle? Questions increase in complexity and depth. For example, students later must answer "What is the radius of the circle that needs to be cut and removed from the center of the tablecloth?" and "What is the area of the tablecloth after removing the center circle?" The "Unit 8, Lesson 2" "Performance Task" provides dimensions of two different cheese blocks and the following prompt: "Cameron wants to buy the piece of cheese with the greater volume. Which of the two cheese shapes has a greater volume and by how much larger? Justify your reasoning."-
- The *Grade 7 TEKS Companion Guide* includes questions that progressively increase in rigor and complexity, leading to grade-level proficiency. For example, materials for TEKS 7.10B provide students with five inequalities where they solve for "x." Complexity increases as students read models and supply the corresponding inequality; students then reverse that process and complete the number line representation corresponding to the provided inequality. Students end with a real-world problem, where they identify the true statement related to the information.

Depth and Coherence of Key Concepts

4.2	Coherence of Key Concepts	11/12
4.2a	Materials demonstrate coherence across courses/grade bands through a logically sequenced and connected scope and sequence.	**2/2**
4.2b	Materials demonstrate coherence across units by explicitly connecting patterns, big ideas, and relationships between mathematical concepts.	**2/3**
4.2c	Materials demonstrate coherence across units by connecting the content and language learned in previous courses/grade levels and what will be learned in future courses/grade levels to the content to be learned in the current course/grade level.	**3/3**
4.2d	Materials demonstrate coherence at the lesson level by connecting students' prior knowledge of concepts and procedures from the current and prior grade level(s) to new mathematical knowledge and skills.	**4/4**

The materials demonstrate coherence across courses/grade bands through a logically sequenced and connected scope and sequence. Materials demonstrate coherence across units by explicitly connecting big ideas and relationships between mathematical concepts. Materials do not explicitly connect patterns 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 *Math -7 (Teacher Course)* provides the *Grade 7 Prior Learning Guide* which lists each grade 7 standard. In the adjacent column, the guide details previous grade-level standards. For example, grade 7 standard 7.4A relates to the grade 6 standards 6.4A, 6.4D, and 6.5A. Standards are written out in the chart to show connectedness. In the "Unit 1, Lessons 2 and 3" "Prior Learning Supports" Section, the table shows that grade 7 standards include 7.3A. The adjacent column explains prior learning: "adding and subtracting positive rational numbers fluently" in grade 5 (5.3H), and how that work was continued in grade 6 by connecting more basic operation work of "multiply and divide positive rational numbers fluently" in grade 6 (6.3E).
- Materials demonstrate coherence across courses as highlighted in the *Grade 7 Mathematics Scope and Sequence*, which connects new mathematical knowledge and skills to prior understandings. Materials include a "Year-at-a-Glance" table showing logically sequenced topics across each unit. For example, in "Unit 1," students identify rational numbers and complete basic operations with rational numbers; students connect understanding to the application of rational number operations to real-world scenarios, including financial literacy.

Scope and sequence materials also include the "Rationale for Unit Progression," which contains reasoning for the sequence and connection of units throughout the course, including how unit concepts build upon one another within the year. The rationale explains how materials are strategically sequenced, including the following: "Unit 1 equips students with the tools they will need to work with rational numbers and reason proportionally, including applications to financial literacy. Unit 2 takes a concrete, then representational, followed by a symbolic approach to solving two-step equations and inequalities with rational number coefficients and constants. Notice that Unit 2 also makes use of financial literacy applications for equations and inequalities." Materials include the *Texas Response to Curriculum Focal Points* (TxRCFP) connections in corresponding unit rationales.

- Within course documents, each unit begins with teacher materials that include the following: a table matching lessons and TEKS, a unit introduction, a unit overview, and a table showing prior learning supports. For example, the "Unit 7 Overview" explains what students previously learned in grade 6 as related to area formulas and problems involving the area of rectangles, parallelograms, trapezoids, and triangles. Materials provide learning expectations for grade 7, that students will develop an understanding of π and solve problems involving the area of circles and composite figures that contain circles, semicircles, and quarter circles. Further explanations detail future learning, showing the coherence across course and grade bands for unit concepts. For example, in grade 8, students solve problems with surface area and volume 3-dimensional figures with circular bases.

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

- *Grade 7 Mathematics Scope and Sequence* includes a structured progression of mathematical concepts and explains how each unit builds on the previous one. For example, "Unit 1" focuses on rational number operations; "Unit 2" involves solving equations and inequalities; and "Unit 4" features the application of topics to develop algebraic reasoning.
- Teacher materials for each unit include the following sections that explain coherence with the big ideas and relationships between mathematical concepts: "Unit Introduction," "Unit Overview," and "Prior Learning Supports." Each "Unit Introduction" highlights the big ideas taught in the unit and establishes connecting relationships of the unit's mathematical concepts to prior learning. For example, "Unit 4" states, "7th grade Unit 4 extends what students studied in Unit 3 to linear non-proportional relationships. Students use verbal descriptions, graphs, tables, and equations to represent linear proportional relationships and linear non-proportional relationships." Then, each "Unit Overview" explains the relationships of the mathematical concepts in the unit to other units throughout the course, in addition to what the concepts looked like in previous grades and how they will look in future grades. For example, the "Unit 4 Overview" reminds teachers that in grade 6, students "explored additive and multiplicative linear relationships." In the previous unit, "Unit 3," students "formalized proportional relationships as having a constant rate of change." In "Unit 4," students understand non-proportional linear relationships with a constant rate of change. "Students study the components and make connections among multiple representations (verbal

descriptions, tables, graphs, and equations)." The materials make connections to future learning; in grade 8, students will formalize differences between proportional and non-proportional linear relationships. Each unit's "Prior Learning Supports" table breaks down information for each unit lesson. The table provides the lesson and lesson title, grade-level TEKS, and related prior TEKS if applicable. For example, "Unit 4, Lesson 1" provides instruction on TEKS standards 7.4A and 7.7A, which connect to the grade 6 previous standards 6.4A, 6.4D, 6.5A, and 6.6A.

- Lessons within each unit build on one another. In grade 7, "Unit 1" focuses on rational number operations; in grade 7, "Unit 2" involves solving equations and inequalities; and in grade 7, "Unit 4," students apply those topics to develop algebraic reasoning. In "Unit 7, Lesson 1" the "Prior Learning Supports" Section explains big ideas and relationships from previous grades that relate to current concepts; for example, "In elementary grades, students studied circles as a shape and focused their attention on classifying polygons and 2-dimensional shapes based on their attributes. In grade 4, students use circles to define and describe angle measures as the amount of a circle whose center is at the vertex of the angle 'cut out' by the rays of the angle and that a degree is 1/360 of a full circle." Materials connect grade 7 standards of measuring radius, diameter, circumference, and area. However, course materials do not explicitly discuss mathematical patterns, nor do materials explain the connections across units of patterns 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.

- *Math - Grade 7 (Teacher Course)* provides coherence across units by connecting content in each lesson with the "Overview of Process Standards." The *Grade 7 Prior Learning Guide* identifies coherence across the TEKS in previous grade levels and connects them to the current grade. For example, standard 7.2A is partnered with the grade 6-related standard 6.2A. Standards, which are written out, detail connections between TEKS.
- Materials demonstrate coherence across units by connecting current unit mathematical concepts and language to what will be learned in past and future grade levels. Materials reinforce and build upon previously learned content, reinforcing the vocabulary and academic language applicable to that strand. For example, in grade 7, consistent vocabulary terms like *ratios* and *equivalent* introduced in grade 6 are utilized in "Unit 5" materials. Simultaneously, the skills from grade 6 of characteristics of shapes connect to content in grade 7 with similar figures. The "Unit 5 Introduction" states, "Students are introduced to scaling geometric figures in this unit where they apply what they know about rate and proportion to attributes of geometric figures (similarity) and scale drawings." The "Unit 1 Introduction" explains that in grades 5 and 6, students added, subtracted, multiplied, and divided fractions and decimals. In grade 7, students demonstrate mastery and fluency involving all four operations on all rational numbers.
- *Math - Grade 7 (Teacher Course)* provides coherence across units by connecting content in each "Unit Overview." "Unit Overviews" connect the current learning to prior and future

learning across the grade levels. For example, the "Unit 3 Overview" explains that in grade 6, students learned about rate, ratio, and proportional relationships from a numerical perspective and made sense of proportional ideas like percents. In grade 7, proportional relationships shift to algebraic thinking as students understand relationships between two variables and rates of change between those variables. Students also convert between measurement systems using proportions and unit rates. Later, in grade 8, students formalize differences between proportional and non-proportional linear relationships, including the constant rate of change being the slope of a linear function.

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.

- *Math - Grade 7 (Teacher Course)* provides coherence at the lesson level in the "Prior Learning Supports" Section. For example, the "Unit 4, Lesson 2" "Prior Lesson Supports" Section explains that in grade 6, students developed a foundational understanding of functional relationships with independent and dependent quantities from tables and graphs. "In 7th grade, students extend their understanding of relationships between two variables through multiple representations with linear relationships." In the "Unit 9, Lesson 5" "Prior Learning Supports" Section explains how in grade 5, students balanced a simple budget and worked for proficiency with adding, subtracting, multiplying, and dividing positive decimal numbers. As sixth graders, students calculated the percent of a number as a part-to-whole ratio. Earlier in grade 7, students gained experience working with categorical data, so now, in this lesson, students apply their knowledge of circle graphs and other representations of categorical data, along with knowledge of working with percents as part-to-whole ratios, to create and analyze a personal or family budget.
- Each lesson overview provides sections that connect prior learning to lesson content, including the "Lesson Introduction," "Lesson Overview," and "Teaching/Instructional Hints." For example, the "Unit 3, Lesson 3" "Teaching Hints" Section states that in grade 6 students worked with rate as "a relationship between two quantities with different attributes." In this lesson, students learn that "a unit rate is a specialized case of a rate where the second quantity, the denominator, is reduced to 1."
- Materials demonstrate coherence throughout in the form of a problem-solving graphic organizer. Consistently, lessons in grade 6 provide this tool so that students "analyze, formulate, determine, justify, and evaluate" in a common template. This visual assists students in organizing information from a word problem, enabling the achievement of conceptual understanding. Additionally, lessons within each unit build on one another. For example, "Unit 7" materials explain connections in lesson concepts: "Students explore pi and solving problems involving the area of circles and composite figures that contain circles, semicircles, and quarter circles." "Lesson 1" introduces parts of a circle; "Lesson 2" introduces area and circumference. Then, in the last lesson, students apply their learning and understanding of all shapes to determine the composite area.

Depth and Coherence of Key Concepts

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

The materials provide spaced retrieval opportunities with previously learned skills across lessons. Materials provide interleaved practice opportunities with previously learned skills across lessons.

Evidence includes, but is not limited to:

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

- Materials provide spaced retrieval opportunities with previously learned skills within lessons and across units. The *Grade 7 Mathematics Scope and Sequence* shows where Texas Essential Knowledge and Skills (TEKS) are taught in multiple units. For example, the mathematical process standard 7.1F is taught in "Units 2, 3, 6, and 9." The number and operations standard 7.2 is addressed solely in "Unit 1." The scope and sequence document details one content TEKS that repeats in units: 7.4A is introduced in "Unit 3" and appears again in "Unit 4." Materials include a "Rationale for Unit Progression" within the scope and sequence document. This rationale explains how the units are sequenced to build on each other. For example, "Unit 4 builds on the learning in Unit 3 to introduce the concept of a constant of proportionality and linear functions."
- Materials provide spaced retrieval opportunities with previously learned skills across lessons. For example, in the "Blackline Master" from the "Unit 4, Lesson 2" "Exploration" Section, students receive questions that refer to the topic of "Unit 4, Lesson 1," constant rate of change: "Is there a constant rate of change between x and y in each situation? How do you know?" *Math - Grade 7 (Teacher Course)* provides the *Grade 7 Mathematics Assessment Guide*. In this platform, teachers have the opportunity to provide spaced retrieval of skills. "Item Types Available in our Digital Platform" states, "All the practice problems in the lesson-level ePubs are available to be assigned through our digital platform. Additionally, teachers will be able to use our item bank(s) to create assessments of their own." The materials include spiral review lessons embedded within some units that include space retrieval opportunities for skills and concepts across units. For example, "Unit 6" includes a spiral review between "Lesson 4" and "Lesson 5." The lesson overview includes details about which TEKS and from which units the spiraled questions are retrieved.

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

- The materials adopt a non-spiraling method, concentrating on individual concepts rather than revisiting and intertwining them across lessons. The materials include practice sets that focus on one concept or skill at a time. For example, the "Unit 5 Test Answer Key" identifies multiple "Process Student Expectations" mixed in from previous units. For example, the "Unit 5 Assessment" covers the content Texas Essential Knowledge and Skills (TEKS), and also identifies process standards 7.1A seven times, 7.1E twice, 7.1F, and 7.1G once each. Materials provide interleaved practice opportunities across units. For example, in the "Unit 6, Lesson 2" "Performance Task," "Face Cards," the focusing standard is 7.6E, but materials also list additional TEKS that were previously taught and are covered in this task: 7.3A, 7.3B, 7.4D, 7.6D, and 7.6I. Materials provide interleaved practice opportunities with previously learned skills across lessons in the "Explanation" Sections. For example, in "Unit 6, Lesson 3," students analyze a data table to retrieve information and progress to using word problems. Materials include practice opportunities where students select and utilize diverse strategies to promote the most efficient strategy rather than relying on a single approach for every problem. For example, students recall areas of rectangles, triangles, parallelograms, and trapezoids from grade 6. This understanding of content is reinforced in "Unit 7," with the inclusion of circles and composite shapes. Students must decide what methods to use to calculate these higher-level problems.
- The *Grade 7 Scope and Sequence* includes a "Rationale for Unit Progression," which provides evidence of how each unit progresses logically to help ensure student success. More specifically, it states how content and skills are practiced across lessons and units by spiraling those skills. For example, it states, "Unit 1 equips students with the tools they will need to work with rational numbers and reason proportionally, including applications to financial literacy." Concepts are revisited in different contexts throughout a unit or course. For example, in grade 7, solving and modeling two-step equations and inequalities previously taught in the year are engaged during "Unit 3" with an activity that reinforces the use of models and the algorithm for equations and inequalities with new content of rates and ratios.
- Materials include review lessons within units that include interleaved practice opportunities with previously learned skills and concepts across units within the course. For example, the "Unit 8" "Spiral Review 1" states, "This spaced retrieval and interleaved practice opportunity across lessons and units addresses the following TEKS from previous instruction: Unit 5, Lessons 1 and 2: 7.5C; Unit 7, Lesson 1: 7.5B; Unit 7, Lessons 2 and 3: 7.9B; Unit 7, Lesson 3: 7.9C; and Unit 8, Lesson 1: 7.9D."

Balance of Conceptual and Procedural Understanding

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

The materials provide questions and tasks that 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.

- Each unit document lists items that will be required throughout the unit for students to use as they create, interpret, analyze, and evaluate a variety of models and representations related to the mathematical concepts covered. For example, the grade 7 "Unit 2" document lists the following items to deepen and enhance student learning of one-variable, two-step inequalities: algebra tiles, cups, counters, and calculators. Lessons provide questions and tasks that prompt students to engage with models and representations as they interpret, analyze, and evaluate concepts. For example, in "Unit 2, Lessons 1 and 2," students use cups (to represent x) and counters (to represent 1) to model solving two-step equations; students model expressions and analyze the concrete examples before solving algorithms of the same expressions.
- Materials present students with three parts to each lesson: the "Exploration" and "Explanation" Sections and "Performance Tasks." Lesson explorations provide instructional videos and "Blackline Masters" activities to guide students through interpreting and analyzing concepts. For example, in the "Unit 7, Lesson 2" "Exploration" Section, teachers model using a paper plate to cut and manipulate, showing the connection between the circumference of a circle and the formula for the area of a circle. Students follow the model using their own plates. Students evaluate and expand on this model to complete tasks: "Use the formula for the area of a circle to calculate the area of the entire paper plate, half the plate (semicircle), and one-fourth of the plate (quarter circle) in the space below." Lesson explanations, the second section of each lesson, guide students through analyzing and evaluating models and representations. For instance, in the "Unit 2, Lesson 1" "Explanation" Section, triangles (to represent x) and circles (to represent 1) create representations and model equations and

inequalities. Teachers prompt students to "Emphasize the connections between a concrete model (cups and counters), pictorial model (strip diagram), and properties of operations that justify the steps taken to solve an equation." Then, in the "ePub," students interpret different pictorial models in order to solve equations.

- *Math - Grade 7 (Teacher Course)* includes performance tasks at the lesson level that require students to interpret and analyze representations for mathematical concepts. For example, in the "Unit 2, Lesson 4" "Performance Task," "Anniversary Party," students evaluate a variety of representations for the costs of three different musicians and three different food choices. Using the representations, students must determine how much Monique and Kevin need to increase their overall budget to accommodate the most expensive choices?" The "Unit 3, Lesson 1" "Performance Task," "Cycling Club," requires students to interpret a variety of models including tables and equations as they determine which of four cyclists has the best average speed on all rides. The tables provided include the following columns: person's name, beginning odometer reading, ending odometer reading, and total ride time.

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

- *Math - Grade 7 (Teacher Course)* provides the "Problem-Solving Template," a course document, for teachers and students to use throughout the year on all lessons. In the second step of the template, the process explicitly states to formulate a plan or strategy with visual models and manipulatives to use throughout the process. Options for visual models include fraction strips, percent bars, and number lines; students also have the option to act out the problem. Each lesson overview contains a "Teaching Hints" Section, which prompts teachers to provide students a variety of models to represent mathematical situations. For example, the "Unit 6, Lesson 3"—"Teaching Hints" Section suggests students use concrete objects to help them create sample spaces and identify which outcomes generate the desired event.
- In unit lessons, students create various models to represent their understanding of concepts. For instance, in the "Unit 2, Lesson 1" "Exploration" Section, students use cups and counters to make representations and solve two-step equations to determine solutions and follow the steps to isolate the variable. Next, students translate the model to a number line to represent possible solutions to the equation or inequality. The teacher's instructions prompt students to connect each action with the cups and counters and make sure students record each step both pictorially and symbolically. In the "Unit 3, Lesson 4" "Exploration" Section, students solve problems using percent bars, scale factors, or proportions and analyze the meaning of rates, ratios, and percents. Teacher guidance explains how students move from receiving strip diagrams to having students choose a model that best fits the situation.
- At the end of each lesson, "Performance Tasks" provide students with opportunities to model mathematical representations and answer questions related to mathematical situations. For example, in the "Unit 6, Lesson 1" "Performance Task," "Pizza Possibilities," students use sample spaces to create different combinations of pizzas, changing the crusts, meat toppings, and vegetable toppings. Students must determine how many different pizza combinations are possible and justify their reasoning. In the "Unit 4, Lesson 2" "Performance Task," "Plumbing

Rates," students analyze linear relationships represented in numerous ways: tables of x- and y- values, ordered pairs plotted on a coordinate grid, and equations determined by the initial value and the changing value.

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

- Questions provide opportunities to apply conceptual understanding. In the TEKS Companions 7.10B and 7.11A, students create models using algebra tiles, number lines, and equations to solve two-step equations. Three stepped-out examples provide models for students before they complete the independent practice questions at the end of the lesson. Questions include the following: "What value of x makes this equation true?" and "Which number line shows the solution to the equation below?" In the TEKS Companion 7.13B, students learn to calculate simple and compound interest, following three stepped-out examples. Then students complete independent practice questions that include the following: "How much interest will he earn at the end of two years?" and "Which account is the better deal for Henley and by how much?"
- Questions included in unit tests require students to apply conceptual understanding to new, real-world situations. For example, in the "Unit 2 Test," after students have solved one variable, two-step equations and inequalities, test questions include "Jasmine bought a soft drink for $1.90. She also bought some cupcakes for $3 each. Jasmine did not spend more than $20. Which inequality can be used to find *c*, the number of cupcakes Jasmine could have bought?" In the "Unit 4 Test," students use algebraic reasoning to determine the solution to a scenario about a flower shop and flowers in a vase given a linear equation. Students answer this question: "If Mrs. Devereaux paid $43.50 for a bouquet of roses with a standard vase, how many roses were in the bouquet?"
- Each lesson in the *Grade 7 TEKS Companion Guide* contains a "Performance Task" that requires students to apply lesson knowledge to a new real-world problem and answer related questions. Guiding questions prompt students through their understanding process and require justifications for explanations. For example, in the "Unit 3, Lesson 3" "Performance Task," "Grocery Store," students apply their understanding of unit rate to determine which items are better values for Absalom to purchase at the local grocery store and which are a better value at Big Box Warehouse. Students must justify their reasoning. In the "Unit 4, Lesson 2" "Performance Task," "Plumbing Rates," students use a plumber's hourly rate and the cost of materials for three upcoming jobs to create an equation that represents the plumber's pay based on the hours worked on the combined jobs. In the "Unit 5, Lesson 2" "Performance Task," "Building a Greenhouse," students apply their understanding of scale drawings to build a greenhouse by finding the new dimensions and determining how much total surface will be covered in the polycarbonate material. In the "Unit 9, Lesson 5" "Performance Task," "Pollyanne's Budget," students analyze a budget table and determine how much money Pollyanne has left to put in her savings each month.

Balance of Conceptual and Procedural Understanding

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

The materials provide tasks that are designed to build student automaticity and fluency 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.

- In *Math - Grade 7 (Teacher Course)*, each lesson's "Exploration" Section and "Blackline Masters" activities provide tasks designed to build student automaticity by prompting them to repeat the skill or process in a variety of situations. The *Teacher Guide* explains in "Research-Based Instructional Strategies" that materials spiral procedures throughout the course to build fluency. Each lesson's "Exploration" Section offers focusing questions that support teachers in guiding students through the process. The lesson's "Explanation" Section provides questions and tasks at varying difficulty levels to build fluency and automaticity, strengthening students' understanding of grade-level content. The *Implementation Guide* states that worked-out examples provide students with opportunities to build procedural fluency.
- For example, in the "Unit 1, Lesson 1" "Exploration" Section, students classify numbers in a Venn diagram, looking at whole numbers, integers, and rational numbers. The "Blackline Masters" instructions explain that using graphic organizers like Venn diagrams has high yields in terms of student learning because they help students organize and categorize information. One question that guides student thinking is "How can you tell which numbers belong to the set of integers and which numbers belong to the set of rational numbers?" In the "Unit 9, Lesson 5" "Exploration" Section, students analyze monthly expenses for a family. Directions guide students to complete a table one step at a time: first, identify the type of expense; next, calculate the total expenses for each category for the month; and last, calculate the percent

of total expenses. The instructional process remains the same, so students deepen their understanding of personal finance as it relates to budgeting and percentages. "Focus Questions" include the following: "What is the problem about? What kind of expense is this?" This routine provides automaticity as students complete the table.

- In the "Explanation" portion of the lesson, students work in the *Grade 7 TEKS Companion Guide*, "ePub." Each lesson begins with a "Tell Me More" Section that provides vocabulary and models and moves to stepped-out examples. Materials explicitly state, "The TEKS Companion Guides provide explanatory narratives and worked out examples with problems for students to practice to build procedural fluency." For example, the "Unit 2, Lesson 1" "Explanation" Section begins with the "Tell Me More" Section, which uses a familiar process of using triangles and circles or number lines to model equations. Two stepped-out examples model solving for *x*, explaining the algorithm behind the models, then the final example provides a related, real-world situation in which students must solve for the variable. Independent practice also moves from basic equations to math concept-based problems to real-world problems. For example, students begin with "-5x-7=23," and once they get to the final question, they must find out how many lightbulbs, at $1.50 each, someone can buy if they want to spend $50 before tax and want to buy a $35 lamp.

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

- Within each unit, grade 7 materials provide opportunities for students to practice applying mathematical procedures, beginning with basic skills and moving to more interconnected, complex skills. *Math - 7 (Teacher Course)* contains mathematical procedural routines to reinforce and apply grade-level content. Each lesson in the unit is individually structured in the concrete-representational-abstract framework to increase students' efficiency and accuracy of the skill. For instance, unit lessons begin with a conceptual hands-on exploratory session to ground students in new content. Next, the "Explanation" component provides examples, reflection, and practice problems. Finally, each unit lesson concludes with a differentiated performance task that allows students to practice applying mathematical procedures and demonstrate academic growth. By repeating this process in each unit, materials develop procedural skills and fluency in practical application.
- For example, in the "Unit 2, Lesson 2" "Exploration" Section, students cut out number tiles and place them on blank squares to represent numbers in an equation. For example, "[redacted]- [redacted]= 24," where students replace the blanks with numbers and identify multiple possible solutions. The "Teaching Hints" Section prompts teachers to remind students of number line truths: an open circle excludes that number, a closed circle includes the number, and more than one point creates a set of values. The "Explanation" portion of the lesson refers students to the *TEKS Companion Guide* ("ePub") and begins with the "Tell Me More" Section, which models equations and inequalities using triangles (for *x*) and circles (for 1). Also included on this page are two sections called "Useful Properties of Algebra" and "Things to Remember," which remind students of mathematical procedures for accurate solutions: add or subtract a number from both sides of the inequality, combine like terms, etc. Two stepped-out examples

accurately model the algorithm as related to real-world problems: one example with a number line and the other with algebra tiles. The third example uses the algorithm to solve a real-world problem with no other visuals. Students increase efficiency in levels of accuracy as they complete tasks, from basic skills problems to real-world situation problems. For example, students begin with "5x + 7 ≤ -23," and by the last question, they must determine which statement provided is true when given a real-world inequality and a solution set. In the final portion of the lesson, the "Performance Task," "Snack Bar," students calculate spending for three students at a concert snack bar. Given each student's budget, the student must make determinations about what candy, soda, hot dogs, and/or burgers the student can afford. Materials offer flexibility as students choose strategies to help with solutions, including inverse operations, guess-and-check, pictorial models, and other methods.

- In the "Unit 5, Lesson 1" "Exploration" Section, students understand similar figures and their relationships. Students follow a process to make a discovery: measure each side length, measure each angle, write and simplify ratios of corresponding sides, list corresponding angle measurements, and draw conclusions. Students complete the process with triangles and then repeat the process with quadrilaterals. The "Explanation" portion of the lesson refers students to the *TEKS Companion Guide* ("ePub"). To begin, the "Tell Me More" Section instructs students how to mark corresponding angles with one arc, two arcs, or three arcs, for example. Students also create organized tables on which to record corresponding side measurements. Two stepped-out examples accurately model using the procedures to find missing side measurements or missing angle measurements in similar figures. In independent practice, students become more efficient with levels of accuracy of procedures as they complete tasks, from basic skills problems to real-world constructed-response problems. For example, students begin with labeled similar figures and must write a proportion to verify similarity. Students end by analyzing four proportions from similar figures and determining which one is not true. The final portion of the lesson, the "Performance Task," "Flowerbeds," presents students with the task of analyzing three triangular flower beds and determining the relationships between them in addition to solving for missing measurements. Materials offer flexibility as students choose strategies to help with solutions, including ratio tables, proportions, pictorial models, or other methods.

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

- Materials provide opportunities for students to evaluate procedures, processes, and solutions throughout the course. For example, teachers and students can access the "Problem-Solving Template," a course document available for use in every lesson. Of the six sections in the template, one section directs students to evaluate the reasonableness of a solution for accuracy by asking, "How do you know your solution is reasonable?" Students use rounding, estimation, and thinking of the unit concepts to see if their answers make sense. The next section directs students to evaluate the problem-solving process for efficiency by asking how the structure helped them to arrive at a reasonable solution and decide what they would do differently next time. Additional support from the *Grade 7 TEKS Companion Guide Teacher Manual* explains effective ways to teach unit lessons. Teachers are instructed to "frame the

problem in terms of a problem-solving process" before working through the stepped-out examples. One detailed problem-solving process provides these steps: analyze the problem, formulate a plan, determine a solution, justify your solution, and evaluate for reasonableness. Supporting questions for the evaluative steps include identifying what mathematical process made the solution valid and identifying how the problem-solving process helped determine the solution. Instruction also explains that teachers have the flexibility to stop during problem-solving to ask students how they know to do a step and to consider different approaches.

- Strategic questions prompt teachers to discuss alternative strategies with students during problem-solving. Students think critically to determine the most efficient approach, find an alternate solution, and/or apply a learned procedure to all situations. For instance, in the "Unit 2, Lesson 2" "Exploration" Section, one debriefing question asks, "Why does an inequality have multiple solutions but an equation has only one solution? How is solving an inequality like solving an equation? How is it different?" In the "Unit 7, Lesson 1" "Exploration" Section, students watch the instructional video and respond to a prompt in their math journal: "If the circumference of the circle is 6 centimeters, how could you find the diameter?" After explaining, students compare answers with peers. Materials provide opportunities to evaluate procedures and solutions for efficiency in the "Tell Me More" Section, located on the first page of each lesson of the *TEKS Companion Guide*. Specifically in the "Unit 6, Lesson 3" "Explanation" Section, students understand qualitative predictions as opposed to quantitative predictions. The real-world situation provides both types of predictions; students evaluate the solutions for accuracy. Questions provided in this lesson that prompt students to think critically include, "What relationships do you see among possible outcomes?" and "What statements can you make about the probabilities of particular outcomes?"
- Materials provide opportunities to evaluate processes, procedures, and solutions for efficiency in "Performance Tasks." The tasks are intentionally designed for flexibility with students solving problems using multiple appropriate strategies. For example, in the "Unit 9, Lesson 1" "Performance Task," "Language," students analyze information presented about a group of students and the languages they speak. The task requires the student to determine percentages for each language. Students are encouraged to use proportions, ratio tables, diagrams, percent portions, operations, or other methods. Students then justify their reasoning. In the "Unit 2, Lesson 3" "Performance Task," "Ballpark Food," students calculate possible prices for pretzels and hot dogs at the ballpark based on various scenarios. Students are prompted to consider possible mathematical statements for the situation and to justify their reasoning.

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

- The *TEKS Companion Guide Teacher Manual* provides embedded supports for teachers entitled, "What's an Effective Way to Teach a Lesson?" Teachers are instructed to "frame the problem in terms of a problem-solving process" before working through the stepped-out examples in the lesson: analyze the problem and formulate a plan. Once students have worked through the problem-solving process, teachers ask students to evaluate how using a

problem-solving process helped determine their solution. Guidance is also provided throughout independent practice to increase efficient approaches. For example, teacher questions include "What would happen if you were given that information in a different representation?" and "How did you know you needed to do that?" Additional support can be found in the *Grade 7 Teacher Guide* at the beginning of each unit. Materials support teachers by providing a "Unit Introduction," "Unit Overview," and "Prior Learning Supports." Information provided explicitly states concepts to be covered in the unit and connects the grade 7 Texas Essential Knowledge and Skills (TEKS) to the TEKS covered in prior grades. Teachers also receive information on how the unit connects to past learning and how it will connect in the future. Within the unit teacher materials, explanations relate one lesson to the next and how the unit ties together to support the learner.

- At the lesson level, the *Grade 7 Math Companion Guide* lesson materials provide embedded supports for teachers to guide students, including "Lesson Overview," "Learning Outcomes," "Prior Learning Supports," "Teaching Hints," and more. Explicit modeling of efficient strategies is provided within these materials. The "Unit 7, Lesson 3" "Teaching Hints" Section provides multiple ways to approach composite area problems. Students can use addition by dividing up sections of the figure and adding up each area, or they can choose to subtract the negative space of the composite figure. "Blackline Masters" show composite figures and provide visual representations. In addition, the lesson's "Instructional Hints" Section suggests engaging students in sharing their strategies for finding the area of the composite figure with one another. Students share their thinking, their final results, and their process. In addition, each lesson's "Exploration" Section provides guiding questions for teachers to use to promote student thinking throughout the task. For example, the "Unit 2, Lesson 2" "Exploration" Section provides multiple prompts, including the following: "If you know the inequality symbol, how can you determine the way the ray in the solution set points on the number line?"
- The *Grade 7 Math TEKS Companion Guide* also prompts teachers to explicitly model efficient strategies in the "Explanation" Section of each lesson. Each lesson has between two and four stepped-out examples to support students in efficiently approaching problems with a variety of strategies. Detailed explanations for success with each item type are provided. For instance, in the "Explanation" Section of "Unit 7, Lesson 5," explicit instructions guide students through three examples, solving for various angle relationships. In the first example, students are prompted and then guided to write an equation for determining a triangle's interior angles and then solve the problem. In each lesson's "Performance Task" Section, "Teacher Notes" provide links that detail the task. For example, the "Unit 7, Lesson 3" "Performance Task," "New Pool" includes a section that explains the task and provides the answer. Then another section, "Mathematically Speaking," provides explicit instruction about strategies students might use, and how this task relates to elementary school concepts of area.

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

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

- The *Grade 7 Mathematics Teacher's Guide* provides recommendations for the use of all materials; the provided checklist mentions a balance of conceptual and procedural emphasis. "All lessons are designed to begin with a rigorous conceptual exploratory application to ground procedural learning that occurs later in the lesson. Procedures spiral throughout the course to build fluency." Unit and lesson materials further detail how the Texas Essential Knowledge and Skills (TEKS) are addressed.
- *Math - Grade 7 (Teacher Course)* provides teacher materials at the beginning of each unit that explicitly state the TEKS. The teacher materials include a table, showing the TEKS covered in each lesson; "Unit Introduction," providing conceptual emphasis; "Unit Overview," relating the procedural relationships between prior learning and future connections; and "Prior Learning Supports," detailing grade-level TEKS and related TEKS from lower grades. In "Unit 8 Teacher Materials," the "Unit Overview" connects concepts from grades 5 and 6 (volume of a rectangular prism and area formulas of various shapes) to grade 7 "Unit 8" materials (determining the surface area of 3-dimensional figures using their net). Teacher materials at the unit level also provide a clear explanation of mathematical concepts—the "why" behind mathematical procedures. Materials clearly state how these same skills and content will need to be applied by students in future grades; in grade 8, "students will solve problems involving cylinders, cones, and spheres."
- Grade 7 lesson overviews explicitly state learning outcomes as related to the knowledge and skills. Each lesson begins with "I can" statements that detail key concepts to be covered. For example, the "Unit 2, Lesson 2" "Learning Outcomes" Section states, "I can use concrete models to represent and solve an inequality. I can use inverse operations and properties of

algebra to solve an inequality. I can locate the solution to an inequality on a number line." During the lesson's "Explanation" Section, the "Tell Me More" Section explicitly states the conceptual emphasis of the TEKS. Next, stepped-out examples are solved and explained so that "students see the rationale of why this step is being done and how to execute that step." Additionally, in every lesson, the "You Try It!" Section walks students through a problem to check their understanding of the procedure. For example, the "Unit 2, Lesson 5" "Tell Me More" Section explains angle relationships (standard 7.11C). Students understand the sums of interior angles of a triangle in addition to other geometry relationships: complementary angles, supplementary angles, isosceles triangles, equilateral triangles, perpendicular lines, and adjacent angles. Three stepped-out examples provide detailed practice in writing and setting up equations and solving for missing angle measurements.

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

- Questions and tasks include the use of concrete models and manipulatives. In *Math - Grade 7 (Teacher Course)*, the "Teaching Hints" Section offers strategies and explanations that support teachers in conveying concepts to students. In the "Unit 2, Lesson 1" "Teaching Hints" Section, teachers use algebra tiles or cups and counters to help students make a connection between the actions they take while solving the problem and the constant or variable. During the lesson's "Exploration" Section, students use visual representations of the equation to complete the "Blackline Masters" independent practice. After students understand the relationships shown by the concrete manipulatives (cups and counters), they move to abstract representations, number lines, and algorithms.
- The student activities move from pictorial representations, concrete models, and manipulatives to abstract representations as conceptual knowledge develops. In the "Unit 7, Lesson 2" "Exploration" Section, students understand the area of a parallelogram by cutting a paper plate into pie-shaped pieces and arranging them to look like a parallelogram. Students relate this formula for area and discover the area formula for a circle, a semi-circle, and a fourth of a circle. The "Blackline Masters" materials then prompt students to use five pictorial representations of different-sized circles and determine the area, circumference, radius, and diameter. As the lesson moves into the "Explanation" Section, pictorial representations support the hands-on activity to solidify thinking. Examples include various representations and situations of circles: drawings, pictorial representations, and abstract representations.
- In the *Grade 7 TEKS Companion Guide's* "Tell Me More" Section, hands-on activities with models or manipulatives representing mathematical concepts are included in the unit lessons. For example, the "Unit 3, Lesson 2" "Tell Me More" Section suggests students use "Cuisenaire® or proportionality rods to help students translate proportional relationships from a verbal description to a numeric or tabular representation." In the "Unit 8, Lesson 1" "Tell Me More" Section, students learn about creating nets from triangular prisms and triangular pyramids. To help distinguish between the lateral faces and the base, students shade in the face(s) of the figure.

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

- *Math - Grade 7 (Teacher Course)* provides practice for students to connect concrete and representational models to abstract concepts during the "Exploration" portion of their lesson. For example, in the "Unit 1, Lesson 1" "Exploration" Section, students complete independent practice guided by a Google Slides presentation. To understand connections between rational numbers, whole numbers, and integers, students fill in a Venn diagram, dragging and dropping numbers into the categories in which they belong. They then analyze the diagram to understand the abstract concepts of each category. Questions guide students through defining each category: "Which rational numbers are integers and which ones aren't? Which integers are whole numbers and which ones aren't?" Supports in the "Unit 9, Lesson 2" "Exploration" Section include an instructional video for comparing dot plots, where students use the representation to define the shape, center, and spread of each set of data. In the corresponding "Blackline Masters" activity, students read the representations and explain the abstract concepts they represent. Questions guide student thinking: "How does the center of the data sets compare? What does this tell you about the two data sets?"
- Students are provided with multiple practice opportunities in the lesson materials, which consist of standards-aligned tasks aimed at mastery of grade-level content. The "Unit 2, Lesson 1" "Teaching Hints" Section explains that concrete models (algebra tiles, beans, cubes, color counters, or cups and counters) provide connections between the actions students take while solving equations and the justification for those actions. As students begin independent practice, the "Explanation" Section of the "ePub" supports students in moving information from visual representations to symbolic and algorithmic representations, equations, and inequalities. Materials also define related abstract concepts in a chart (like additive inverse) and provide corresponding symbolic representations ($a + (-a) = 0$). Teacher instructions specifically state to "Connect the actions with the cups and counters to the operations. Make sure students record each step both pictorially and symbolically so they connect actions, such as ‘remove five beans’ with ‘subtract five beans.’"
- "Performance Tasks" from each lesson provide students with opportunities to connect representational models to abstract concepts using real-world situations. For example, the "Unit 2, Lesson 5" "Performance Task," "Truss Dimensions," provides students with triangle trusses and their angle measurements. Students must find a strategy to determine the side lengths of the triangles. Materials remind students that equations are tools that help them represent geometric situations. Students create drawings of the triangular truss, labeling the known information. Then they write equations and solve to determine the missing angle measurements. Questions and prompts that guide students from the images to the solution include, "What equation can be used to determine the missing side measurements of the triangular scale drawing?" and "What are the measures of the sides of the drawing of the triangular truss?"

Balance of Conceptual and Procedural Understanding

5.4	Development of Academic Mathematical Language	14/14
5.4a	Materials provide opportunities for students to develop their academic mathematical language using visuals, manipulatives, and other language development strategies.	**3/3**
5.4b	Materials include embedded guidance for the teacher addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context.	**2/2**
5.4c	Materials include embedded guidance for the teacher to support the application of appropriate mathematical language to include vocabulary, syntax, and discourse to include guidance to support mathematical conversations that provide opportunities for students to hear, refine, and use math language with peers and develop their math language toolkit over time as well as guide teachers to support student responses using exemplar responses to questions and tasks.	**9/9**

The materials provide opportunities for students to develop their academic mathematical language using visuals, manipulatives, and other language development strategies. Materials include embedded guidance for the teacher 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.

- Units and lessons provide intentional introductions of vocabulary to students, including repeated practice. In the "Unit 8, Lesson 1" "Exploration" Section, the instructional video introduces new vocabulary to students with visuals and manipulatives. For example, the video begins with a written definition of *surface area*, and then written definitions of the two types: *lateral surface area* and *total surface area*. Next, students see what a net looks like for a rectangular prism, while simultaneously seeing the written explanation. The two bases are color-coded orange and the four lateral sides are color-coded blue. The same process is shown for a triangular prism, color-coding the bases and lateral faces. Students are provided the net of a rectangular prism with lengths and widths marked and are shown how to find the sum of the area of all six shapes to determine the total surface. Instructional videos provide visuals, auditory definitions and explanations, and concrete models.
- The *Grade 7 Mathematics Teacher's Guide* explains a six-step process for developing students' vocabulary in each unit. The process promotes language development as students interact with vocabulary words in visual contexts, manipulative wordplay, and small-group discussions. The six steps are as follows: 1.) Introduce the new term with a student-friendly

example. 2.) Instruct students to restate the example in their own words. 3.) Allow students to create visual representations related to the term. 4.) Engage students in activities that deepen their understanding of the term. 5.) Allow time for student conversations related to the term and its meaning. 6.) Play games that deepen students' understanding of the vocabulary terms.

- In addition, materials provide a Frayer model template connected to lesson vocabulary that includes the definition in the student's own words, examples, non-examples, and facts/characteristics related to the word. In each grade 7 lesson overview, a vocabulary section links the lesson's academic vocabulary to partially completed Frayer models for each vocabulary word; a blank template is also available if teachers decide to add other necessary academic terms. The Frayer model supports language acquisition by pre-teaching the term and giving students a foundational understanding of its meaning before they put that meaning into mathematical action. For example, in "Unit 7, Lesson 2," vocabulary related to circumference and area of circles includes *area*, *circle*, *circumference*, *diameter*, and *radius*. In "Unit 9, Lesson 2," partially completed Frayer model templates are provided for *dot plot*, *shape of data*, *spread of data*, *symmetry (data)*, *skew (data)*, *center of data*, *mean*, *median*, *mode*, and *range (data)*. The link to *mode* states the definition as "the value that occurs most often in a set of numbers." In the example, the numbers listed are as follows: 20, 30, 40, 40, 50, 60, and 80. The mode = 40. The facts/characteristics listed state, "It may be helpful to make a tally." Non-examples are left blank for the student to fill in.
- The *Grade 7 TEKS Companion Guide* begins each "Explanation" Section with a "Tell Me More" Section, where students are provided visual representations and written definitions for each bolded vocabulary term. In the "Unit 2, Lesson 5" "Explanation" Section, academic vocabulary includes *acute triangle*, *isosceles triangle*, *obtuse triangle*, and *right triangle*. Students are provided definitions written in paragraph form, relating these terms to the overall concept of angle relationships. Students also are provided with two information boxes: one that explains the sum of interior angles equals 180° and the other explains multiple geometric relationships, like "two acute angles whose measures add up to 90° are complementary." The visual representation of a right triangle is used to model adding interior angles, developing student understanding. In the "Unit 7, Lesson 2" "Explanation" Section, academic vocabulary focuses on *circumference* (circle), and *area* (circle). Students are given written definitions of each term. For *area*, a color-coded model and a written paragraph explain how the formula builds off the circumference algorithm. Students are provided tips like, "Remember that the diameter of a circle is twice the length of the radius."

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

- *Math - Grade 7 (Teacher Course)* provides embedded guidance for teachers to scaffold and support academic mathematical vocabulary by providing clear guidance on vocabulary procedures. The *Grade 7 Mathematics Teacher's Guide* explains a six-step process for developing students' vocabulary in each unit. While completing the process, teacher guidance scaffolds support to develop the students' academic vocabulary. Teachers provide the first definition to students and then ask the students to repeat the definition in their own terms.

Next, students create visual representations, adding another layer of understanding. As students speak with peers and incorporate the vocabulary and meaning into conversations, they develop an even deeper understanding. Frayer model templates, which support several of the six steps, are provided at each unit and lesson level. Frayer models come partially completed to support students in processing new vocabulary. For example, "Unit 9, Lesson 2" provides a link to *mode,* which states the definition as "the value that occurs most often in a set of numbers." In the example, the numbers listed are as follows: 20, 30, 40, 40, 50, 60, and 80. The mode = 40. The facts/characteristics listed state, "It may be helpful to make a tally." Non-examples are left blank for the student to fill in. Blank Frayer models are also provided for vocabulary terms not listed in materials or to provide support to learners who no longer need the partially completed template.

- *Math - Grade 7 (Teacher Course)* includes lesson materials and activities that are inclusive of and aimed at supporting students in listening, reading, speaking, and writing with new academic vocabulary. In each lesson's "Exploration" Section, "Support for Emergent Bilinguals" provides teacher guidance "to scaffold listening and speaking during mathematical discourse, as well as reading and writing to acquire and express understanding, including academic and classroom vocabulary." For example, the "Unit 9, Lesson 6" "Exploration" Section provides sentence stems to Emergent bilingual students to express opinions as they form conjectures. Sentence stems include the following: "I think ____ because . . ." and "I agree because . . ." Each lesson's "Exploration" Section also scaffolds learning through the "Instructional Hints" Section, which offers advice and nudges to engage students in the lesson at a deeper level. In "Unit 8, Lesson 1," the "Instructional Hints" Section recommends bringing in concrete examples to scaffold understanding of abstract concepts: "Consider having prism and pyramid solids available for students' reference during this lesson. Consider asking students to make a Venn diagram to compare and contrast properties of prisms and pyramids to help students identify similarities and differences."
- Scaffolds and guidance are also provided after students have been introduced to new mathematical vocabulary. In the "Explanation" component of each lesson, students read the "Tell Me More" Section and analyze stepped-out examples; scaffolds also provide the "You Try It" problems, which include peer discussions, personal reflections, and questioning to engage in the problem-solving process. For example, in the "Unit 2, Lesson 2" "Explanation" Section, students learn about two-step inequalities and build their vocabulary for the word *inequality*. These vocabulary terms repeat throughout the lesson and appear in instructions when students work through practice problems. Additionally, "Example 1" presents students with the following "You Try It" problem: "What is the solution set for the inequality $-5.2x + 4.1 \geq -32.3$?" Students are provided stepped-out empty boxes to help scaffold the order of operations they must use to solve the inequality.

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.

- *Math - Grade 7 (Teacher Course)* provides multiple opportunities for students to use appropriate mathematical language. Unit and lesson internalization protocols plus conversation guidance develop students' math toolkits over time. Opportunities include instructional hints, support for Emergent bilingual students, and student support for reasoning and productive struggles. The "Teaching Hints" Section provides guidance in each lesson overview, and the "Instructional Hints" Section supports teachers during each lesson's "Exploration" Section. The "Instructional Hints" Section from "Unit 6, Lesson 2" includes specific details about vocabulary from students' prior learning and builds the terms into grade 7 mathematical concepts. Teachers promote discourse so students hear, refine, and use math language with peers. As students understand probabilities and their complements, materials prompt teachers to address any confusion students may have with the word *complement* due to the same word used in reference to angles. "Use some linguistic supports for students to think about how the same word has similar, yet different, meanings in the new context of probability." The "Exploration" Section includes teacher support for mathematical discourse throughout each lesson, providing opportunities for students to hear math language with peers. "Unit 2, Lesson 2" encourages such discourse as it states, "Provide opportunities for students to speak and listen about the mathematics in small-group discussions."
- Teacher guidance is embedded in the materials to prepare for and facilitate strong student discourse grounded in lesson vocabulary and mathematical concepts that utilize appropriate academic terms. For example, in grade 7 unit lessons, various types of questions are included for the teacher to open discussions with students by using small group discussions, whole-group debriefing questions, personal reflections, analysis of worked-out examples, and math journal entries. For example, after the "Unit 5, Lesson 1" instructional video, students speak and write: "As students watch the video, have them listen for high-frequency words like *multiply*, *scale, proportion*, and *ratio*. Pair students and ask them to discuss the video, using the high-frequency words to tell their partner what they saw and heard." In addition, the "Exploration" Section provides guidance for teachers through "Support for Emergent Bilinguals," which provides students with opportunities to listen and speak mathematically. "Unit 2, Lesson 2" includes specific prompts for student discourse so they communicate more effectively in cooperative groups. While studying one-variable, two-step inequalities, student discourse could revolve around these topics: "I know the ray points to the ___ because . . ." and "There should be a _____ point on the number line because . . ."
- Each lesson's "Exploration" and "Explanation" Sections offer discussion questions that support students in their reasoning and productive struggle by facilitating conversations. Discussion questions encourage mathematical conversations among students without restricting their responses. In the "Unit 3, Lesson 2" "Explanation" Section, as students develop an understanding of constant rate of change, teachers prompt thinking and promote discourse by asking, "What does the rate of change look like in a table? What does the rate of

change look like in a graph?" In the "Unit 6, Lesson 1" "Explanation" Section, students learn to graph sample spaces, so as the teacher facilitates mastery, one question materials provide is "What strategies do you use to create an organized list that includes all the possible outcomes?" Student responses require refined math language and proper syntactic structures. Teachers incorporate student responses to delve deeper, clarify, and redirect.

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

Process standards are integrated appropriately into the materials.

- *Math - Grade 7 (Teacher Course)* presents a *Grade 7 Scope and Sequence* document with Texas Essential Knowledge and Skills (TEKS) citations, including process standards. The table presented lists every standard and then checks off all units that include that standard. Each of the seven process standards is included in course materials and spiraled throughout the year. For instance, in the *Grade 7 Scope and Sequence*, the TEKS alignment chart states that 7.1F will be incorporated into "Units 2, 3, 6, and 9." "Unit 2" incorporates standards 7.1A and 7.1F.
- Each unit document identifies the TEKS and content for each lesson, process standards, and prior TEKS from previous grades. In the grade 7 "Unit 1" document, process standards 7.1A, 7.1B, and 7.1E will be included in the unit on decimals, fractions, and percents.
- Materials also include a problem-solving template that meets the criteria of the process standard TEKS 7.1B, which states that students use a problem-solving model that includes analyzing information, formulating a plan, finding a solution, justifying and evaluating that solution, and evaluating the process. The template is divided into six sections that follow the standard exactly. Teachers and students can access two copies of the templates: one leaves each section blank and the other provides questioning and narrative support. For example, when students evaluate the problem-solving process, one question to prompt thinking asks, "Next time you use this problem-solving process, what would you do differently?"

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

- Within the *Grade 7 Mathematics Scope and Sequence* document is the "Rationale for Unit Progression" which states materials are strategically sequenced with connections to the "Texas Response to the Curriculum Focal Points (TxRCFP)," creating TEKS-aligned instructional materials in a logical progression. The process standards are all incorporated in the "TxRCFP" and are woven throughout the course.
- Within the *Grade 7 Mathematics Teacher's Guide*, "TEKS Alignment of Activities, Learning Objectives, and Unit Assessments" describes the alignment of the TEKS to course materials. It clearly explains which process TEKS are the focus, but many others spiral and may be assessed. Teachers can see which standards align with each item on the assessment answer keys. The description in the *Grade 7 Mathematics Teacher's Guide* states that the process TEKS listed within each lesson are specifically targeted, but those may not be the only process standards students meet.

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.

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

- *Math - Grade 7 (Teacher Course)* includes the "Overview of Process Standards" at the lesson level. This document identifies the process standards used in the lesson content and specifies how each is incorporated. For example, for standard 7.1B, the "Unit 8, Lesson 2" "Overview of Process Standards" explains that students will solve problems involving the volume of rectangular prisms or pyramids and incorporate visual models including diagrams and volume formulas to analyze information, make a plan, and determine a solution, evaluating its reasonableness.
- The "Unit 6, Lesson 1" "Overview of Process Standards" incorporates standard 7.1E, which states that students "will create and use representations to organize, record, and communicate mathematical ideas." Specifically, students will create a list or tree diagram to describe the sample space for a simple or compound event.
- Students meet standard 7.1G in "Unit 5, Lesson 1," as the "Overview of Process Standards" explains that they will display, explain, and justify mathematical ideas about similar figures and scale factors. Students will display thinking in a visual format, explain critical attributes of similar figures, and justify reasoning in scale drawings.

Productive Struggle

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

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

Evidence includes, but is not limited to:

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

- *Math - Grade 7 (Teacher Course)* materials explain opportunities throughout the course where students think mathematically and make sense of grade level. The "Recommended Use of All Materials" Section includes the research-based instructional strategy, "Depth of Key Concepts." Activities and tasks balance conceptual and procedural knowledge to help students build problem-solving skills by weaving together process standards and content knowledge and skills. For example, in "Unit 2, Lesson 1," the Texas Essential Knowledge and Skills (TEKS) includes process standard 7.1C and content standards 7.10B and 7.11A.
- The materials consist of regular practice exercises and daily assessments that require students to showcase a deep understanding, engage in critical thinking, and persevere through problem-solving. In the "Unit 7, Lesson 4" "Exploration" Section, teachers offer students sentence stems to encourage discussions around theoretical probability as they "bridge big ideas." These high-level skills provide students time to think mathematically. In the "Unit 8, Lesson 4" "Exploration" Section, students complete task sheets, where they interpret, analyze, and calculate volume.
- The *Grade 7 TEKS Companion Guide* teacher manual explains that the "You Try It!" problems in the "Explanation" portion of the lesson help students apply their immediate understanding of skills and concepts after working through a similar stepped-out problem. Students employ the step-by-step process and develop a growth mindset while solving problems. For example, in the "Unit 1, Lesson 2" "You Try It!" activity, students read a word problem, choose the operation to use, and solve using the standard algorithm for fractions. The "Explanation" Section guides teachers as they support students in their "productive struggle;" materials provide "Advancing Questions" designed to get students to think mathematically. Teachers

ask the advancing question and then walk away, allowing students time to make sense of lesson concepts. For example, in "Unit 1, Lesson 1," one advancing question asks, "Which rational numbers are integers and which ones aren't?" Later, in independent practice, practice opportunities scaffold appropriately to help students make sense of math and build the perseverance to work through the concepts.

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

- Each unit provides a problem-solving template in which all six steps support students' understanding that there can be multiple ways to solve problems and give them appropriate support to explain and justify their answers to any problem or task. The template includes the following steps: analyzing information, formulating a plan, finding a solution, justifying and evaluating that solution, and evaluating the process. Teachers and students have access to two copies of the templates offering various levels of support: one leaves each section blank and the other provides guidance questions. For example, when students evaluate the problem-solving process, one question to prompt thinking asks, "Next time you use this problem-solving process, what would you do differently?"
- In lesson materials, the "Exploration" Section includes mathematics tasks and questions, where students practice representation, writing, and discussion. Students explain and justify multiple ways to solve problems in journal entries. Instructional videos relay concept information to support teachers and students. For example, in "Unit 5, Lesson 1," the video explains and models finding the scale factor of similar figures; in the journal entry, students explain how they can look at a scale factor and know if the change will be an enlargement or a reduction. They resume the video to check for accuracy. In the "Unit 7, Lesson 3" "Exploration" Section, students use composite figures to calculate the areas of the shapes. Students are challenged to explain how they found the area of each composite shape and justify the reasonableness of their solutions.
- "Performance Tasks" at the end of each lesson include teacher notes with question stems for probing and supporting students. "Performance Tasks" require students to explain or justify that there are multiple ways to solve a problem. For example, the "Unit 2, Lesson 1" "Performance Task" asks students to develop a logic puzzle, where students exchange peer-created equations and solve them. Guidance for teachers explains that students use representations and choose a strategy to solve each line of the puzzle. Strategies might be inverse operations, guess-and-check, pictorial models, or other methods. In the "Unit 4, Lesson 1" "Performance Task," students determine the constant of proportionality of two cars and their corresponding gas mileage. Students then justify which car has a better rate.

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

- Each "Exploration" Section of all lessons for *Math - Grade 7 (Teacher Course)* includes instructional videos. Videos provide journal time for students to write and discuss math with

peers and teachers. For example, the "Unit 3, Lesson 3" "Exploration" video provides students with a sentence to copy in their math journals, explaining how to solve a unit rate situation. The sentence helps focus student discussion of mathematical thinking, possible solution strategies, and connections between strategies. "Unit 4, Lesson 4" provides debriefing questions where students write their responses. Students pause the video after each question and take time to answer it. One question asks, "How do you find the probability of something NOT happening?"

- Each lesson's "Exploration" Section provides instructional hints that involve students writing or speaking about math to make sense of their learning. For instance, "Unit 5, Lesson 2" suggests students draw a diagram when they have a verbal description of a problem that uses scale factors. The drawing helps students visualize the relationships. In "Unit 7, Lesson 2," the instructional hint prompts students to use math sense as they change the formula for the area by replacing the diameter with the radius.
- The "Exploration" Sections provide support for Emergent bilingual students that require students to discuss math with peers and teachers and deepen their understanding in a variety of ways. For example, the "Unit 2, Lesson 2" "Exploration" Section provides teachers with scaffolding vocabulary such as, "When you say less than/greater than, what do you mean? I know the ray points to the ____ because … There should be a ____ point on the number line because…" "Unit 6, Lesson 2" includes specific prompts for students to promote math discussions with peers. Linguistic supports help students think about mathematical concepts. One prompt includes, "What does it mean to find a probability?"

Productive Struggle

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

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

Evidence includes, but is not limited to:

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

- *Math - Grade 7 (Teacher Course)* provides teacher support to foster conversations with students. In each lesson's "Exploration" Section, teachers use guiding questions to promote students' problem-solving throughout the task as student explanations guide conversation. After watching the instructional video and completing the corresponding "Blackline Masters" activity, the class engages in a debriefing activity where they must explain conceptual understandings. For example, in the "Unit 2, Lesson 2" "Exploration" Section, student explanations detail their thinking through the problem. "If you know the symbol is 'greater than,' what does that tell you about the solution on the number line?" In "Unit 4, Lesson 1," students use tables to determine relationships. Students analyze several tables and provide an explanation for the following question: "How does knowing how the table changes help you find the constant of proportionality?" Student explanations enable the teacher to gauge their level of understanding.
- During the "Explanation" Section, teachers allow students to have "productive struggle" as they analyze stepped-out examples in the lesson in small groups or pairs. Students collaborate to "formulate a plan, justify the solution, and evaluate for reasonableness." During this, guided questions move students' thinking forward as they defend arguments for their process. General questions can be used in all units and all lessons; for example, "How did you use a mathematical formula or procedure to determine your answer" and "How did a problem-solving process help you determine your solution?" Some questions guide teachers with specific, concept-related questions that support student thinking. For example, in "Unit 4, Lesson 1," as students study the constant of proportionality, the teacher asks, "What does the rate of change look like in a table?" and "What does the rate of change look like in a graph?" Next, as teachers give direct instruction, materials suggest they stop mid-problem and ask students how they know to do a step and consider different approaches. With this process, students engage in whole class arguments, defending their thinking and conceptual development.

- Each lesson provides open-ended "Performance Tasks" and assessments that give students opportunities to communicate their reasoning and assess understanding. Each "Performance Task" asks students to work through real-world situations and justify their reasoning. "Performance Tasks" are designed to be partner work, and students are encouraged to offer justifications to explain the best strategy used in their solutions. For example, in the "Unit 3, Lesson 3" "Performance Task," "Grocery Store," questions include, "Can you rephrase what the problem is asking?" and "What representations might you use?" In this case, options include pictorial models, number lines, and algebraic properties. As students work, the teacher nudges their conversations and direction with guiding questions. These include, "How did you determine your answer?" and "What evidence from the problem/task supports your answer?" Students provide justifications and reasoning.

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

- The *Grade 7 Mathematics Teacher's Guide* includes "Providing Students Effective Feedback" Section. The article explains to teachers that focused, actionable feedback supports students in productive struggle, scaffolding development to a deeper level of understanding. In the "Explanation" Section of each lesson, materials suggest teachers "support student reasoning and productive struggle through questioning." The teacher monitors independent practice and uses questions provided to clarify information, focus the student on problem details, and advance the student's level of understanding. The following focusing question is from the "Unit 1, Lesson 1" "Explanation" Section: "What do you know?" Guidance to assist teachers with explanatory feedback is provided in the "Performance Tasks;" each provides teacher notes and a sample solution. "Mathematically speaking..." explains the task to teachers and also offers feedback for student responses. For example, the "Unit 3, Lesson 1" "Performance Task," "Cycling Club," explains to the teacher that students need to interpret the time for one cyclist to hours only–as it is given in hours and minutes. "Look fors" provide a bulleted list to guide teachers in finding areas for feedback. An example warns teachers to "look for... correct computations of rate for each rider and correct comparisons for ordering values."
- The *Grade 7 Mathematics Teacher's Guide* includes "Common Misconceptions in Grade 7 Mathematics." The guide includes seven misconceptions students may make throughout the year, such as, "Students may confuse simple events with compound events when determining probability." It further guides teachers with feedback that corrects misconceptions, provides practice opportunities for newly learned concepts and skills, strengthens understanding, and empowers students not to repeat mistakes.
- All lessons include "Instructional Hints" and "Teaching Hints" that provide teachers with ways to address common misconceptions, and dialogue to ensure students achieve mastery. The "Unit 2, Lesson 2" "Exploration" Section includes the following "Instructional Hint:" "Remind students that a point on a graph represents a value that makes the equation or inequality true." Materials further explain that numerous points form a line or a ray. Circles in the number line indicate boundaries, either inclusive or exclusive. To offer feedback on student responses, materials provide the following questions to nudge students: "How do you know

whether your solution is correct?" and "When you say..., what do you mean?" These prompts help teachers directly address known misconceptions and give in-the-moment feedback. In "Unit 2, Lesson 2," the "Teaching Hints" Section gives guidance for teachers to "Remind students that a point on a graph represents a value that makes the equation or inequality true."