IMRA Review Cycle 2024 Report

Publisher Name	Program Name
Cosenza & Associates, LLC	*Math*
Subject	**Grade Level**
Mathematics	6

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

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

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

IMRA Reviewers

Flags for Suitability Noncompliance — 0

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

Flags for Suitability Compliance — 0

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

Alleged Factual Errors — 12

Public Feedback

Flags for Suitability Noncompliance — 0

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

Alleged Factual Errors — 0

Public Comments — 0

Quality Review Summary

Rubric Section	Quality Rating
1. Intentional Instructional Design	52 / 53
2. Progress Monitoring	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 comprehensive unit overviews that provide background content knowledge to effectively teach the concepts.
- 2.1 Instructional Assessments: Materials do not include diagnostic assessments.
- 4.2 Coherence of Key Concepts: Materials do not explicitly connect patterns between mathematical concepts.

Summary

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. However, the 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 6 (Teacher Course)* provides the *Grade 6 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 6.
- The grade 6 "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 6.1A, 6.1D, 6.1E, 6.4E., 6.4F, 6.4G, 6.5B, and 6.5C. ELPS covered in "Unit 1" include 1.A, 1.F, 2.C, 2.D, 3.E, 3.H, and 4.D. Materials provide a comprehensive pacing guide which lists all grade 6 TEKS in one chart and all grade 6 ELPS in another. Charts specify which unit(s) covers each ELPS. For example, 6.4G is taught in "Units 1, 3, and 4." ELPS 1.A is addressed in "Units 1 and 4."

- The “Rationale for Unit Progression” explains “Units in the 2024 Grade 6 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 6 Mathematics.” For example, the bulleted list includes "Comparing rates and ratios requires proportional reasoning, a skill that is being developed for the first time in grade 6.”

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

- The materials include a *Grade 6 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 efficiently. For example, the pacing guide specifies daily lessons and topics for "Unit 1 Decimals, Percents, and Fractions" over eighteen days. Specifically, materials reduce the number of instructional days for “Lesson 5” from four days to three days to “recapture up to one instructional day.”
- 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 Working with Positive Rational Numbers" over thirteen days with one day of enrichment opportunities.
- The pacing guide includes a table for 210 instructional days and provides guidance on modifying the curriculum's scope and sequence including 2–5 days of enrichment/extension opportunities after each unit test; for example, Days 146–149 recommend extension lessons for Algebraic Reasoning.

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 6 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 from

equivalent fractions to equivalent ratios and rates to introduce proportional reasoning. Unit 5 keeps spiraling those same TEKS strands in application to symbolic representation of equations and inequalities, and Unit 6 builds toward high school Algebra with explorations of graphing with rational number ordered pairs and examining multiple representations of functions."

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

- The *Grade 6 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. As you read through the unit overview, how does learning build and connect throughout the unit?" 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?"
- The *Grade 6 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" and begin with the end in mind by unpacking the lesson assessments, answering "What will students need to know and be able to do to succeed in learning the content and processes in this lesson?"
- The *Grade 6 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 6 Implementation Guide* offers a comprehensive materials list that categorizes all the resources required throughout the year, including when the material will be needed and how many (or how much) of that material is needed. For example, students need proportionality rods for "Unit 1 Lesson 1." Each group needs one set.
- The *Grade 6 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 "Observation Protocol and Checklist," 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 6 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 academic vocabulary necessary to effectively teach the concepts in the unit. Materials do not include unit overviews that provide effective background content knowledge 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 6 (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, “Unit 3” explains “In 4th grade, students compared fractions, and grade 5 students compared and ordered two decimal numbers using inequality and equality symbols. In 6th grade students are introduced to integers as whole numbers and their opposites and then extend their knowledge of comparing and ordering numbers to a set of rational numbers.”
- Each unit document provides components for effective instruction including objectives and pacing calendars. For example, the grade 6 “Unit 1” document objectives include, “I can… represent a large number using scientific notation and represent a small number using scientific notation."
- 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 6 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” template for “Unit 8, Lesson 1” are the following: dot plot, stem-and-leaf plot, and variability.

- 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 6 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. Some units offer visual representations to demonstrate how students are exposed to this concept; others use written expression to describe the unit goal. In "Unit 7," the parent letter states, "Your student will extend their understanding of the area to include triangles, parallelograms, and trapezoids."
- Parent letters provide specific strategies and activities to support student learning at home. For example, "Unit 7" guidance includes "Seek out opportunities to examine properties of triangles, including: taking three straight-edged objects of any length and wondering if they can be used to make a triangle" and "Talk with your student about their grade 6 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 five 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 6 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 questions ask “What is an integer? What does absolute value tell you about a number?” The "I can" statements correspond with the learning objectives for integers/integer operations; the first statement says, "I can… determine and interpret the absolute value of a number."
- 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 4th grade students represented fractions and decimals (.1 and .01) as distances from zero on a number line.”
- The “Lesson Plan” Section of the “Lesson Overview” includes three detailed 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. 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 6 Course Level Document*, each unit overview provides scheduling options for 165, 180, and 210-day calendars and 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 19–21, with the "Performance Task" occurring on instructional day twenty-two.
- 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 6 Mathematics Implementation Guide* provides a 4-column table, which details the following: "Item," "Quantity," "Unit," and "Lesson." Materials specify what items are needed for each lesson and how many to provide. For example, in "Unit 7 Lesson 1," each student will need a ruler, a protractor, and at least two colored pencils.
- Each grade 6 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 6 Mathematics Teacher Course*, rulers, colored pencils, protractors, glue/tape/paste, grid/graph paper or colored paper, and markers.
- Each "Lesson Overview" breaks down the materials list into two parts: "Teacher Materials" and "Student Materials." For example, in "Unit 7 Lesson 1," teachers need paper, a ruler, colored pencils, and a protractor. Students need all of these materials as well as a pencil.
- 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. For this example, materials provide links to 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 6 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 7 Lesson 1,” students work together and answer eleven problems related to the properties of triangles: identify the smallest angle, identify the largest angle, and list side lengths. 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 is “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 7 Lesson 1,” 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 6 TEKS Companion Guide* to present “mini-lessons to supplement classroom activities and instructional tasks.” For example, “Unit 2 Lesson 3” includes a box labeled, "You try it." Within that practice box, students complete a model to represent a division of fractions problem. The *Grade 6 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 3, Lesson 5” students complete sixteen 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. Materials do not include diagnostic assessments. 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 included in the materials. 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 6 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 2, Lesson 1,” “Exploration Blackline Master Fraction Multiplication,” provides four fraction multiplication models, in which students match the number sentence to the correct representation. Then, students simplify four fraction-multiplication expressions. The last six questions ask students to “carry out each indicated operation and justify answers.”

- 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 *Rational Numbers: Math Carnival Game,* which involves the analysis of data derived from a spin-the-wheel game. 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 6 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, where students supply the exact numerical answers or justify their reasoning for an answer. For example, one question asks "Is 2.4 increased or decreased when it is multiplied by 7/8? Justify your response by computing the product and writing a number sentence that compares it to 2.4 using the symbols <, >, or = as appropriate." End-of-unit assessments provide no evidence of a diverse range of question formats such as multi-select, drag-and-drop, or hot spots.
- Materials offer a digital platform with an item bank of practice problems. Items include the following question types: 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 6 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 6 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 6 Mathematics Assessment Guide* provides no evidence of diagnostic assessments.

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

- The *Grade 6 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 73, whereas the "First Semester Summative Assessment" requires two days: Days 89 and 90. The "Unit 1" document provides a "Time allotments for lesson pacing" table, which suggests allowing 45–90 minutes per unit test.
- The *Grade 6 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 6 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 "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 6 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 6 course*. For example, in "Unit 3 Teacher Materials," the table lists "Lessons 1 through 5." In "Lesson 1," materials cover student expectation 6.2B. "Lesson 2" addresses 6.2A and 6.4G; "Lesson 3" includes 6.2C, 6.2D, and 6.4G; and "Lessons 4 and 5" cover student expectations 6.3C and 6.3D. Then, the "Unit Test" lists all TEKS in the unit from each lesson.
- The *Grade 6 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 6.4H, 6.8A, and 6.1F.

- 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 6.2B.
- According to the *Grade 6 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 6.2B. The information provided shows “Tell Me More,” which includes a detailed explanation and related vocabulary, two examples, and fifteen practice problems.
- The TEKS in the “Performance Task” align to those listed in the unit and lesson materials. For example, “Unit 2, Lesson 1” provides “6.3B Performance Task” *Math Carnival Game*, “6.3E Performance Task” *Food Delivery*, and “6.3E Performance Task” *Homecoming Mums*.
- 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 6.2A and process student expectation 6.1D.
- Materials do not provide diagnostic assessments.

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

- The *Grade 6 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 6 unit present a summative evaluation that comprises multiple-choice, text entry, or open-response questions designed to follow the standards. For example, the “Unit 3 Test” includes nine 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 6 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 6 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 “6.3B Performance Task,” *Math Carnival Game* in “Unit 2, Lesson 1,” teachers look for “a solution strategy to evaluate each fraction and its potential product with any given whole number factor.” Teachers also look for “correct determination of the spaces that create a product larger than the original factor and those that create a product smaller than the original factor."
  The *Grade 6 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 6 Mathematics Teacher Guide* also includes a bulleted list of common misconceptions to look for in grade 6 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 6 (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 5" "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 "assign students the ePub to provide direct instruction on the content along with guided practice through examples and a set of practice questions." 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 "Provide models like patty paper for students to fold into fractions and visualize the multiplication. Connect the models and multiplication sentences back to one meaning of multiplication."
- 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 1, Lesson 1" "Performance Task," teachers look for a "solution strategy to determine the ratio of each color jawbreaker as a percent, a correct determination of percent value for each color jawbreaker, and student justification of choice of solution strategy."
- The *Grade 6 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 6 Mathematics Assessment Guide* provides a "Progress Tracking Tool" which lists all the TEKS for grade 6 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 6 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 6 (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 the "Performance Task" "Teacher Guidelines," materials provide teaching methods, including visual aids and manipulatives, to aid students working toward achieving proficiency in expected grade-level skills.
- 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 in clarifying their thinking and working through problems with the teacher. Guidance in the "Unit 4, Lesson 1" "Exploration" Section suggests asking students who have not yet reached proficiency "Clarifying Questions" and "Focusing Questions," such as, "When you say _____, what do you mean?" and "What is this problem about? What do you know? What do you want to find out?"

- The *Grade 6 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. Materials direct teachers to anticipate where students may need additional support. Materials 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 6 mathematics?" Additionally, materials include in-class differentiation for students who have not mastered the content, stating, "Use the mini-lesson in the Grade 6 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 6 Mathematics Teacher Guide* provides explicit steps with academic language instruction. 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 with the term(s) in a variety of ways including activities that deepen students' understanding, use discourse to discuss vocabulary with each other, and games that allow students to play with the term(s).
- The *Grade 6 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 6.2E and 6.3A includes definitions of these academic terms: *divisor*, *dividend*, *quotient*, and *reciprocal*. Additionally, teachers are encouraged to have students develop their own definitions and draw pictures, and, as an additional embedded support, the *Grade 6 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 6 (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" provide differentiated instruction

for varying levels of difficulty. For example, materials provide two versions for students having already demonstrated proficiency: on-level (for proficient students), and enriched (for highly proficient students). Even though all performance levels receive the same data or problem, each task level has more rigorous questions and activities for students to complete. For example in "Unit 4, Lesson 1," the enrichment task adds additional questions such as, "How much faster in terms of minutes would the second-place finisher need to be in order to win? What is the range of the times in minutes for the top 3 finishers? To the nearest hundredth minute, what is the average of the top finish times over the last 20 years? Justify your reasoning."

- In *Math - Grade 6 (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 with, "How can you tell which rods have lengths with a 2:3 ratio?" In the "Explanation" Section of the same lesson, the "Advancing Question" asks, "Is this true in every case?"
- 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, but after the unit test, materials list the lesson as "Enrichment and Extension." In the pacing guide, materials suggest topics but provide no specific 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 6 (Teacher Course)* materials include "Teaching Hints" with prompts and guidance that aid in communicating the concept. For example, the "Unit 5, Lesson 2" "Teaching Hints" prompt teachers to explain mathematical relationships. For example, "Emphasize the relationships between addition/subtraction and multiplication/division when working with the order of operations. Subtraction is like adding the opposite number. Division is like multiplying by the reciprocal." The "Unit 7, Lesson 2" "Teaching Hints" prompt the teacher to use concrete models to explicitly teach. For example, "You may use grid paper or large sheets of colored paper. Label the dimensions of the original rectangle so that students may see how the base length, b, and height, h, move with the triangle that creates the parallelogram."
- Materials divide lessons into three components: "Exploration" and "Explanation" Sections and "Performance Tasks." These resources feature a teaching framework with precise guidance to distinguish among instructional groupings: entire class, small group, and individual. In the "Unit 5, Lesson 2" "Exploration" Section, materials include teacher prompts and guidance in the "Blackline Master" to support teachers in explaining the concepts. For example, the "Unit 5, Lesson 2" "Explanation" Section offers question prompts to facilitate student reasoning and productive struggle. For example, the "Clarifying Question" asks, "When you say _____, what do you mean?" "Focusing Questions" ask, "What is this problem about? What grouping symbols do you see?" Materials instruct teachers to ask "Advancing Questions (ask and walk away)" such as, "What is the relationship between addition and subtraction? What is the relationship between multiplication and division?" Then, to check understanding, materials provide

guidance for teachers and students to communicate conceptual understandings. For example, the "Assessing Question" asks, "How do you know which operation to do first?" In the "Explicit Instruction" option, teachers guide students through the "Tell Me More" Section, where students are introduced to academic vocabulary and explanations of the concept. Teacher prompts suggest students work through the examples, checking the stepped-out solutions provided. "Guide students to try the corresponding You Try It! problem."

- The *Grade 6 Mathematics* "ePub" provides a range of illustrated examples, which include guidance to support teachers in communicating the concept and related academic vocabulary. Materials provide three stepped-out examples of varying question types and levels of conceptual comprehension, modeling solutions for teacher support.

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

- The *Math - Grade 6 (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 of a variety of instructional approaches to improve student comprehension. For example, the "Unit 6 Overview" states, "In 6th grade, students were introduced to integers and negative rational numbers in Unit 3. In this unit, students extend their prior knowledge to a coordinate system with all four quadrants, including integers and negative rational numbers."
- The *Math - Grade 6 (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 effective lesson delivery and guidance and provide links that connect to teacher guidance. 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 for "Unit 1, Lesson 5" provide random grouping recommendations so that students work in "groups no larger than three students per group." Materials suggest steps for effective lesson delivery: watch the video, distribute the activity sheet, and facilitate student group exploration and reflection. The "Instructional Hint" offers teacher guidance to recommend explicit connections between ratios and percentages by using proportions. 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 three 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 at four varying levels with guidance on assigning them or allowing students to select a task based on their interests.

- *Grade 6 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 a narrative 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" but then uses the following guiding questions: "What key information does the problem provide? What actions are being done in the problem? What operations do those actions suggest?"

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, which implements whole-class instruction. Then, students engage in independent and small group work to analyze and reflect on new concepts using the coordinating "Blackline Master." For example, 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." During independent and small group work, materials provide teacher guidance to support structured learning through focus questions. The "Unit 5, Lesson 1" "Focusing Questions" ask students, "What is this problem about? What do you know? What do you want to find out?"
- 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 independent practice questions and analyze responses to determine proficiency.
- In *Math - Grade 6 (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," "Birthday Party," guidance includes asking students to set the problem

up as one large expression or break it into smaller parts. Additionally, teacher guidance indicates that the order of operations should still be followed.

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 6 (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 the 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. For example, "Support for Emergent Bilinguals" in the "Unit 4, Lesson 2" "Exploration" Section instructs teachers to "provide students with the opportunity to speak and listen to ideas and information in increasingly complex spoken language commensurate with converting metric units of measure." For example, a chart shows cognates in English and Spanish for mass/weight, capacity, and length: *gram/gramo*, *kilogram/kilogramo*, etc. Teachers connect to students' prior knowledge and experiences with unit conversion, metric units, and their Spanish-English cognates. In "Unit 5, Lesson 1,"

teachers support emergent bilingual students by having students "compare and contrast prime and composite numbers in order to review and acquire basic and grade-level vocabulary."

- Each "Exploration" Section contains teacher guidance on supporting emergent bilingual students with vocabulary and sentence stem suggestions. In "Unit 5, Lesson 2," 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 5, Lesson 3" "Exploration" Section, students "narrate, describe, and explain what they know about equivalent expressions with increasing specificity and detail." Question scaffolds provide student direction; for instance, "How would you describe what two equivalent expressions look like?"
- The *Grade 6 Mathematics Teacher 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 6 Mathematics Teacher 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 the more complex English language." For example, in "Support for Emergent Learners" from "Unit 1, Lesson 5," teachers "encourage students to use accessible language and learn new and essential language in the process." Teachers "provide graphic organizers such as hundreds grids or problem-solving charts to help students visualize the mathematics." Teachers "pre-teach important vocabulary using strategies such as a Frayer model." Each "Lesson Overview" also details corresponding ELPS and their processes in that particular lesson. For example, in the "Unit 6" "Lesson 1 Overview," targeted ELPS include "4.G Cross-curricular second language acquisition/reading." Students read a variety of texts with increasing levels of comprehension. 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 participate in shared reading, retelling or summarizing, responding to questions, and taking notes.

- *Math - Grade 6 (Teacher Course)* includes a scope and sequence that aligns to the TEKS and ELPS, specifically ELPS standards connected to each lesson. For example, in "Unit 3, Lesson 1," the ELPS that are addressed are 3.C and 3.F. Every lesson "aligns with at least one ELPS" and provides different forms of assistance to help emergent bilingual students develop and improve their academic content understanding through verbal, written, and reading formats.

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.

- Each grade 6 "Unit Document" provides an alignment to the TEKS and ELPS. This document details the specific ELPS linked to the lessons in the unit. For example, the grade 6 "Unit 2 Document" connects the following English Language Proficiency Standards (ELPS) to the unit: 1.A and 3.G (cross-curricular second language acquisition/speaking); 2.G (cross-curricular second language acquisition/listening); 4.C and 4.F (cross-curricular second language acquisition/reading); and 5.B (cross-curricular second language acquisition/writing).
- *Math - Grade 6 (Teacher Course)* materials include embedded guidance for teachers in each lesson's "Exploration" Section and "Support for Emergent Bilingual Students," which encompasses establishing cross-linguistic connections, providing rephrasing suggestions, and conducting checks for understanding. In the "Unit 4, Lesson 2" "Exploration" Section, teachers call back students' prior knowledge of unit conversion and metric units and their Spanish-English cognates. Teachers provide speaking and listening opportunities centered on "converting metric units of measure." In "Unit 5, Lesson 2," English learner support suggests pairing students to develop oral and listening skills for "basic and academic vocabulary regarding the order of operations." Vocabulary words for this activity include *add*, *multiply*, *next step*, *exponent*, *parentheses*, *grouping symbol*, and *expression*.
- The *Grade 6 Mathematics Teacher Guide* explains "to support students' acquisition of new vocabulary terms, pre-teach the vocabulary terms using a strategy such as a Frayer model." Materials include partially completed templates of the Frayer model and blank templates. Students visit previously learned vocabulary and concepts, completing a six-step routine to increase comprehension through oral and written communication and develop academic vocabulary. The following steps involve developing academic vocabulary: 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.

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.

- Each grade 6 "Unit Document" provides an alignment to the TEKS and ELPS. This document details the specific ELPS linked to the lessons in the unit. For example, the grade 6 "Unit 2

Document" connects the following English Language Proficiency Standards (ELPS) to the unit: 1.A and 3.G (cross-curricular second language acquisition/speaking); 2.G (cross-curricular second language acquisition/listening); 4.C and 4.F (cross-curricular second language acquisition/reading); and 5.B (cross-curricular second language acquisition/writing).

- *Math - Grade 6 (Teacher Course)* materials include embedded guidance for teachers in each lesson's "Exploration" Section and "Support for Emergent Bilingual Students," which encompasses establishing cross-linguistic connections, providing rephrasing suggestions, and conducting checks for understanding. In the "Unit 4, Lesson 2" "Exploration" Section, teachers call back students' prior knowledge of unit conversion and metric units and their Spanish-English cognates. Teachers provide speaking and listening opportunities centered on "converting metric units of measure." In "Unit 5, Lesson 2," English learner support suggests pairing students to develop oral and listening skills for "basic and academic vocabulary regarding the order of operations." Vocabulary words for this activity include *add*, *multiply*, *next step*, *exponent*, *parentheses*, *grouping symbol*, and *expression*.
- The *Grade 6 Mathematics Teacher Guide* explains "to support students' acquisition of new vocabulary terms, pre-teach the vocabulary terms using a strategy such as a Frayer model." Materials provide include partially completed templates of the Frayer model and blank templates. Students visit previously learned vocabulary and concepts, completing a six-step routine to increase comprehension through oral and written communication and develop academic vocabulary. The following steps involve developing academic vocabulary: 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.

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. For example, within each "Lesson Overview," Frayer model templates support academic vocabulary development. In each lesson, materials provide opportunities for students to increase comprehension and use academic vocabulary as they express opinions, scaffolded by sentence stems. For example, "Unit 7, Lesson 1" provides students with the following supports: "I think ____ because..." and "I agree because..."
- 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 6 "Unit 1 Document" lists ELPS 1.A (Cross-curricular second language acquisition/speaking). Next, materials include details of this standard and strategies for developing it across all content areas. The materials also provide a link and guidance for utilizing resources on the Texas Education Agency's website to support emergent bilingual students. 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 *Grade 6 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. The material includes Frayer model templates which students use to complete several of these steps.

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.

- Materials present ideas, tasks, and real-life problem-solving scenarios in line with the TEKS, incorporating tangible representations. For instance, the "Unit 9, Lesson 2" "Exploration" Section addresses Texas Essential Knowledge and Skills (TEKS) for financial literacy: 6.14A, 6.14B, and 6.14C. The "Exploration" Section provides a video that distinguishes between using a debit card and a credit card. Additionally, students assess the significance of a positive credit history; the provided Google Slides ask students to evaluate a credit report and respond to the question, "Why would this account be listed as having adverse or negative information?"
- Materials provide practice opportunities that require students to demonstrate depth of understanding using problems at the appropriate level of rigor as specified in the TEKS. Activities in each lesson's "Exploration" Section scaffold from mathematical contexts to real-world applications. For instance, in the "Unit 2, Lesson 1" "Exploration" Section, instruction is rooted in concrete learning before moving to more abstract problems. First, students engage in concrete application as they utilize patty paper to model finding the product of fractions. The "Exploration" Section includes an instructional video that guides students to shade different parts of patty paper, overlapping the two pieces, to determine the product of fraction multiplication. In their journals, students then attempt the following problem: "Mr. Wilson planted apple trees in 3/8 of his orchard. Of the varieties he plans to harvest, 1/3 of them are green apples. Draw a picture and then calculate the fraction of Mr. Wilson's orchard that contains green apple trees. Write the solution using a complete sentence." The second portion of each lesson, the "Explanation" Section, moves students to analyze real-world examples, which model step-by-step solutions. The "You Try It" Section provides opportunities and practice problems that offer varying levels of rigor, often requiring multiple steps. For example, the "Unit 7, Lesson 4" "Explanation" Section includes a "Tell Me More" Section, four stepped-out examples, and eleven practice problems including, "A water tank in the shape of a right rectangular prism has edge lengths of 3.5 meters, 3 meters, and 6 meters. If the water

tank is currently half full, write an equation that can be used to determine the current volume of water in the tank. Use the equation to calculate the current volume in the tank."

- In the *Grade 6 Math TEKS Companion Guide*, materials include practice opportunities throughout each lesson and questions progressively increase in rigor and complexity, leading to grade-level proficiency. For example, in the lesson for TEKS 6.3C and 6.3D, students use two-color counters and then number lines to determine the products/quotients. Then students complete word problems, including the following: "The Lake level at Choke Canyon Reservoir decreased by 2 feet each week. At this rate, which integer represents the change in the lake level after seven weeks?" In the lesson for TEKS 6.10B, students complete three problems that use simple substitutions for a variable. Next students solve three problems for a variable with an inequality, and finally, students set up the problem before solving it.

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". The "Exploration" Section provides an instructional video with an activity to practice the skill at the entry-level, progressing to more in-depth, real-world context examples. The "Unit 6, Lesson 1" "Exploration" Section has students graphing pairs of positive rational numbers. The activity instructs the students to "name the coordinate points shown on a grid below," and then "plot and label the coordinates shown in the table on the grid provided." In the "Explanation" Section, higher-level questions include increased complexity: "The ordered pair represents the grocery store. Describe how to move from this location in order to get to the school." Questions also increase in complexity in Bloom's Taxonomy; for example, the "Unit 6, Lesson 2" "Explanation" Section requires students to move from listing to creating.
- Scaffolding questions in each "Performance Task" connect concepts within and across lessons, modules, and units. Materials provide various levels of access for students to work at their level, progressing up to and sometimes surpassing the rigor of the TEKS. For example, the "Unit 6, Lesson 1" "Performance Task" gives students a make-believe city with multiple points plotted, including the home of a kid named Zavier. Students are required to answer the following prompt: "Zavier lives at point (6, −6). How many city blocks must he walk or bike from his house to the school closest to him? Which building in town is the farthest away from Zavier's house? Justify your reasoning."
- The *Grade 6 TEKS Companion Guide* includes questions that progressively increase in rigor and complexity, leading to grade-level proficiency. For example, materials for TEKS 6.10B start students with three problems that involve simple substitution for a variable and increase in complexity to word problems where students set up the equation before solving for the variable.

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 -6 (Teacher Course)* provides the *Grade 6 Prior Learning Guide* which lists each grade 6 standard. In the adjacent column, the guide details previous grade-level standards. For example, grade 6 standards 6.2B and 6.2C relate to the grade 4 standard 4.4G. Standards are written out in the chart to show connectedness. In the "Unit 3, Lesson 4" "Prior Learning Supports" Section, a table shows that grade 6 standards include 6.2C, 6.2D, and 6.4G. Additionally, the adjacent column explains prior learning: "represent fractions and decimals to the tenths or hundredths as distances from zero on a number line" in grade 4 (4.4G) and comparing and ordering decimals "using symbols <, >, or =" in grade 5 (5.2B).
- Materials demonstrate coherence across courses as highlighted in the *Grade 6 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 represent and identify benchmark fractions and percents and identify equivalencies among positive rational numbers; then, students connect that understanding to applying percent scenarios in the real world. 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 that "Unit 1" prepares students to work with rational numbers and reason proportionally. "Unit 2" and "Unit 3" explore the range of number types found in the rest of the course and connect to the *Texas Response to Curriculum Focal Points* (TxRCFP), using operations to solve problems.

- Within course documents, each unit begins with teacher materials that include a table of matching lessons and TEKS, a unit introduction, a unit overview, and a table showing prior learning supports. For example, the "Unit 2 Overview" explains what students previously learned in grades 4 and 5 as related to fractions and decimals. Materials provide learning expectations; for example, in "Unit 2," students extend learning to include all four operations with all forms of positive fractions and decimals. Further explanations detail future learning, showing the coherence across the course and grade bands for unit concepts. For example, by grade 7, students have progressed to full fluency with operations on all rational numbers.

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

- *Grade 6 Mathematics Scope and Sequence* includes coherence by explicitly connecting mathematical concepts and explaining how each unit builds on the previous one, connecting big ideas. For example, in grade 6, "Unit 1" focuses on building number sense with decimals, fractions, and percents; "Unit 2" involves solving problems with all types of positive rational numbers; and "Unit 5" features solving equations using learned rational number operations.
- Teacher materials for each unit include sections that explain coherence with the big ideas and relationships between mathematical concepts including "Unit Introduction," "Unit Overview," and "Prior Learning Supports." Each "Unit Introduction" highlights the big ideas taught in the unit and establishes connecting relationships between the unit's mathematical concepts. For example, "Unit 4" introduces students to foundational concepts of rate and ratio, which materials refer to as "cornerstones of middle school mathematics." This understanding leads directly to linear functions in grade 8 and Algebra 1. Materials address this unit as pivotal because students learn about proportional thinking and reasoning. 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. The "Unit 1 Overview" introduces students to percents, incorporating "concrete models, fractions, and decimals. Students utilize benchmark fractions and percents as a tool to build on their prior learning experiences with fractions and decimals to generate equivalent forms of rational numbers." In "Unit 3," students compare and order multiple forms of rational numbers, converting between fractions, decimals, and percents as necessary. "As students progress through grade 6 and into grade 7, they are expected to solve meaningful real-world problems involving rational numbers." Each unit's "Prior Learning Supports" table breaks down information for each unit lesson. The table provides the lesson and lesson title, grade-level Texas Essential Knowledge and Skills, and related prior TEKS if applicable. For example, "Unit 4, Lessons 3 and 4" provide instruction on TEKS standard 6.4H, which connects to the grade 5 standard 5.7A.

- Coherent progression is maintained in units. For instance, "Unit 1" focuses on building number sense with decimals, fractions, and percents; "Unit 2" involves solving problems with all types of positive rational numbers; and "Unit 5" requires students to solve equations using the rational number operations they have learned. In the "Unit 4, Lesson 5" "Prior Learning Supports" Section explains that in grade 6, students solved problems using proportions and, to show the multiplicative nature, also used scale factors, input-output tables, and graphs. 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 6 (Teacher Course)* provides coherence across units by connecting content in each lesson with the "Overview of Process Standards." The *Grade 6 Prior Learning Guide* identifies coherence across the TEKS in previous grade levels and connects them to the current grade. For example, standard 6.2B is partnered with the grade 4-related standard 4.4G. Additionally, 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 6, consistent vocabulary terms like *rational numbers* and *fractions* introduced in grade 5 are utilized in "Unit 2" materials. Simultaneously, the skills from grade 4 and grade 5 of adding and subtracting fractions connect to content in grade 6 as students learn to multiply and divide fractions using similar vocabulary. The "Unit 2 Introduction" states, "Previously, students multiplied fractions and whole numbers and divided unit fractions and whole numbers. Students' experiences in this unit build on that prior knowledge to develop concepts and procedures necessary to add, subtract, multiply, and divide all forms of positive rational numbers." The "Unit 5 Introduction" explains that solving an equation is a cornerstone of grade 6 mathematics that continues developing in grades 7 and 8 and Algebra 1.
- *Math - Grade 6 (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 4 Overview" explains that in grade 5, students solved problems involving conversions within a measurement system using a scaling strategy. In grade 6, students study rates and ratios, converting measurements within one measurement system; now, in "Unit 4," students understand rate as a comparison of two quantities with different units of measure and ratio as a comparison of quantities with the same units of measure. Unit materials also use equivalent ratios to determine scale factors and percents. Later, in grade 7, students extend their knowledge to include percent increase or decrease. Students will also understand scale factors and similar figures. Further learning connects the big ideas to dilations in grade 8 and graphing functions in Algebra 1.

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 6 (Teacher Course)* provides coherence at the lesson level in the "Prior Learning Supports" Section. For example, the "Unit 7, Lesson 1" "Prior Lesson Supports" Section explains that in grade 4, students developed the concept of angle and classified angles and triangles as acute, right, or obtuse in the current grade. Students extend their knowledge of triangles to include the sum of interior angles, the relationship of lengths of sides to measures of angles, and the requirements of three segment lengths to form a triangle.
- Each lesson overview provides sections that connect prior learning to lesson content; these sections include the "Lesson Introduction," "Lesson Overview," "Prior Learning Supports," and "Teaching/Instructional Hints." For example, the "Unit 3, Lesson 3" "Teaching Hints" Section states that students will use prior knowledge of number lines to compare and order whole numbers, fractions, and decimals. Connections are also made to "Unit 1," where students convert fractions, decimals, and percents. The "Unit 6, Lesson 1" "Instructional Hint" Section states that students begin with a review of grade 5 material, specifically plotting points only in Quadrant I. The instructions provide prompts for the teacher to "connect back to students' experiences in 5th grade when they graphed points, including pairs of fractional numbers, in Quadrant I." In the "Unit 6, Lesson 1" "Prior Learning Supports" Section, materials explain the connections to prior learning in grade 5. Students used the Cartesian coordinate plane but were not yet aware of integers, so they were restricted to only positive numbers in Quadrant I. In grade 6, as students understand integers, they move to Quadrants II, III, and IV.
- Materials demonstrate coherence throughout in the form of a problem-solving graphic organizer. Lessons in grade 6 provide this tool so students can "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, in "Unit 4, Lesson 1," students understand ratios and rates. In "Lesson 2" and "Lesson 3," students use rates and ratios for metric and customary conversions. Then, in the last three lessons, students apply their learning and understanding of ratios and rates to explore and work with real-world problems."

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 across and within units. The *Grade 6 Mathematics Scope and Sequence* shows where Texas Essential Knowledge and Skills (TEKS) are taught in multiple units. For example, the mathematical process standard 6.1F is taught in "Units 2, 4, 5, 7, and 8." The number and operations standard 6.2D is addressed solely in "Unit 3." The scope and sequence document details four content TEKS that repeat in units: 6.4E and 6.5B are introduced in "Unit 1" and appear again in "Unit 4;" standard 6.4G is introduced in "Unit 1" and appears again in "Units 3 and 4;" and 6.4H is introduced in "Unit 4" appears again in "Unit 7."
- Spaced retrieval opportunities with previously learned skills and concepts within units are provided by materials. This is included in the *Math - Grade 6 (Teacher Course)* under course level documents in the *Grade 6 Mathematics Scope and Sequence* document where TEKS taught in multiple units are identified. In the "Grade 6 Pacing Guide," various timelines provide evidence of when a review lesson can occur within the curriculum. For example, in "Unit 6" of Algebraic Reasoning in the 165-day pacing calendar, two review lessons have been scheduled to spiral content on days 105 and 112. In "Unit 3," between "Lessons 3 and 4," there is an embedded spiral review. The lesson overview includes details about which TEKS and from which units the spiraled questions are retrieved.
- 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 7" combines "Unit 5" knowledge about equations and prior knowledge about area and volume; students use formulas for area of parallelograms, triangles, and trapezoids. Despite this, in Standard 6.4H is integrated into each "Performance Task." Materials provide spaced retrieval opportunities with previously learned skills across lessons. For example, in the "Blackline Master" from the "Unit 5, Lesson 4" "Exploration" Section, students use the previously taught concept of identifying expressions and equations to "categorize each mathematical statement as an equation or as an expression." *Math - Grade 6 (Teacher Course)* provides the *Grade 6 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."

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 only include practice sets that focus on one concept or skill at a time. For example, the "Unit 7 Test Answer Key" identifies multiple "Process Student Expectations" mixed in from previous units. For example, the "Unit 7 Assessment" covers the content Texas Essential Knowledge and Skills (TEKS), and also identifies process standards 6.1A, 6.1C, and 6.1D twice each and 6.1B and 6.1F four times each. The process standards are listed next to the content standards tested in each question.
- Materials provide interleaved practice opportunities across units. For example, in the "Unit 4, Lesson 5" "Performance Task," "Wireless Store," the focusing standard is 6.4B, but materials also list the following additional TEKS that were previously taught and are covered in this task: 6.3E, 6.4E, 6.5A, and 5.3I. Materials provide interleaved practice opportunities with previously learned skills across lessons in the "Explanation" Sections. For example, in "Unit 3, Lesson 4," students apply their knowledge of integers they learned in "Unit 3, Lesson 1" to add and subtract the integers now. 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 are guided on utilizing number lines, two-color counters, and the algorithm in "Unit 3, Lesson 4." This understanding of content is reinforced in further units, including real-world problems and solving one-step equations and inequalities.
- The *Grade 6 Mathematics 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 5 keeps spiraling those same TEKS strands in application to symbolic representation of equations and inequalities." Concepts are revisited in different contexts throughout a unit or course. For example, previously taught rational number operations (integers) are engaged during "Unit 3" with an activity that reinforces the use of models and the algorithm for adding and subtracting integers.
- 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 5" "Spiral Review 1" states, "This spaced retrieval and interleaved practice opportunity across lessons and units addresses the following TEKS from previous instruction: Unit 1, Lessons 3 and 4: 6.4G; Unit 3, Lesson 3: 6.2D; Unit 5, Lessons 1 and 2: 6.7A; and Unit 5, Lessons 3 and 4: 6.7D.

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 6 "Unit 1" document lists the following items to deepen and enhance student learning of decimals, fractions, and percents: proportionality rods, hundreds grids, fraction bars, and percent bar models. Lessons provide questions and tasks that prompt students to engage with models and representations as they interpret, analyze, and evaluate concepts. For example, in the "Unit 3, Lesson 4" "Teaching Hints" Section, students add and subtract integers using two-color counters or number lines as representations; 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, the "Unit 1, Lesson 5" "Exploration" Section shows percentages through a variety of models: percent bars, proportional fractions, pie graphs, and hundreds grids. Students move from concrete models to abstract problems. Lesson tasks provide students with already set-up percent bars and proportions before moving to blank percent bars. Next, students evaluate and solve problems involving percentages using necessary models. Teacher instructions prompt students to use graphic organizers such as hundreds grids or problem-solving charts to help students visualize mathematics. As the lesson progresses, lesson explanations guide students through analyzing and evaluating models and representations. For instance, in the "ePub" examples, students use visual models to

represent percents. "Example 1" showcases a shaded percent bar that students evaluate before completing the "You Try It" problem, where they label a new percent bar using similar information. "Example 2" showcases a partially filled-in hundreds grid and guides students to understand the percent represented.

- *Math - Grade 6 (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 6, Lesson 1" "Performance Task," "Treasure Map," students evaluate a variety of models and representations on coordinate planes and follow directions from one point to determine "What points are possible locations for Captain Coordinate to dig for the treasure?" In the "Unit 8, Lesson 1" "Performance Task," "Kenitra's Data," students analyze data to help Kenitra determine which research situation has the least amount of variability and which has the most.

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

- *Math - Grade 6 (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 with a variety of models to represent mathematical situations. For example, the "Unit 5, Lesson 3" "Teaching Hints" Section prompts the teacher to have students use algebra tiles and graphing technology to evaluate if two expressions are equal.
- In unit lessons, students create various models to represent their understanding of concepts. For instance, throughout "Unit 1, Lesson 2," students complete a chart by cutting and pasting various models of fractions and percents: fractions, number lines, strip diagrams, decimals, 10x10 grids, percent bars, and percents. In the "Unit 3, Lesson 4" "Exploration" Section, students analyze and evaluate the meaning of adding and subtracting integers, connecting to counters and number lines; next, students practice problem-solving and choose a model that best fits each situation. The instructions in the student activity state to use two-color counters for a few problems, use a number line for a few problems, and use algorithms to solve the remaining problems.
- 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 1, Lesson 5" "Performance Task," "Garden Expansion," students analyze the area of a flower garden and use percent calculations to determine the area of the garden when it is increased. Materials remind students to use a percent bar or other visual model to represent real-world problems. In the "Unit 5, Lesson 4" "Performance Task," "Tiling Area," students create two equal equations using the given model and answer the following question: "What are two ways the men may have used to compute the amount of tile needed for the room? Justify your reasoning."

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 Texas Essential Knowledge and Skills (TEKS) Companion 6.2C, students communicate the order of rational numbers in real world context. Two stepped-out examples provide models for students before they complete the independent practice questions at the end of the lesson. Questions include the following: "Which of the following numbers will be located closest to zero?" and "In what order should the following rational numbers appear on the number line?" In the TEKS Companion 6.4A, students differentiate between additive and multiplicative relationships, following two stepped-out examples. Then students complete independent practice questions that include the following: "Which of these statements represents an additive relationship?" and "Compare tables B and D. Which shows a multiplicative relationship?"
- Questions included in unit tests require students to apply conceptual understanding to new, real-world situations. For example, in the "Unit 7 Test," after students complete a study of geometry and measurement, test questions include: "What is the interior volume of the building in cubic yards?" and "Which equation could Julie use to calculate the number of cubic meters of water that the aquarium would hold when it is completely full?" In the "Unit 8 Test," students represent and analyze data to determine "which set of data corresponds to the box plot below?" and "How many students slept between 6 and 11 hours the previous night, according to Ricco's survey?"
- Each lesson in the *Grade 6 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 4" "Performance Task," "Golfer Rankings," students use operations with integers to determine the combined score for five golfers across four tournaments. Total and average scores are ranked before computing measures of center. Students work with the data to determine the mean, median, mode, and range. The "Unit 5, Lesson 1" "Performance Task," "Classroom Tickets" provides students the opportunity to apply their conceptual knowledge of expressions and equations to answer questions about using tickets to purchase various prizes at the carnival. Questions include "What possible items or combination of items can he purchase using his tickets? What can Joaquin purchase and have the fewest tickets left over? Justify your reasoning."

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 6 (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 3" "Exploration" Section, students analyze a visual and determine which decimal, fraction, and percent it represents; students repeat this process for six models. The activity begins with traditional shapes (like a circle and rectangle) with shaded parts and moves to more complex shapes. The instructional process remains the same, so students deepen their understanding of fractions, regardless of the shape of the whole. "Focus Questions" include the following: "How many parts represent the whole? How would you write a fraction as a decimal? Percent?" In the "Unit 3, Lesson 2" "Exploration" Section, students classify numbers in a Venn diagram, looking at whole numbers, integers, and rational numbers. The "Blackline Masters" instructions suggest using an attribute chart that lists the

number and goes in order to determine if the number is a whole number, an integer, or a rational number. Students place checks in each category that applies before placing the number in the Venn diagram. This routine provides automaticity as students process attributes in a structured order.

- In the "Explanation" portion of the lesson, students work in the *Grade 6 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 3, Lesson 5" "Explanation" Section begins with the "Tell Me More" Section, which uses a familiar process of two-color counters and number lines to teach the new material of multiplying integers. Two stepped-out examples of related problems explain the algorithm behind the models, then the final example demonstrates the algorithm without visuals. Independent practice moves from basic equations to math concept-based problems to real-world problems. For example, students begin with "-3(7)," and once they get to the final question, they must find the decrease in lake-water levels after seven weeks if it decreases by two feet a week.

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 6 materials provide opportunities for students to practice applying mathematical procedures, beginning with basic skills and moving to more interconnected, complex skills. *Math - 6 (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 3" "Exploration" Section, students match four models of fraction division to their corresponding number sentences. The "Teaching Hints" Section prompts teachers to continue using models to connect the concept of division to grouping. Next, students create models for problems and then solve the problems. The "Explanation" portion of the lesson refers students to the *TEKS Companion Guide* ("ePub") and begins with the "Tell Me More" Section, which models and explains the standard algorithm for division and defines key vocabulary. Two stepped-out examples accurately model the algorithm as related to real-world problems: one example with the visual representation and the next without. 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 "⅗ divided by ¼," and by the last question, they must determine how many ⅔ portions are in a recipe that makes 5 ¼ cups. The final portion of the lesson, the "Performance Task," "Cutting Wood Sections," presents students with the task of applying division of fractions to determine how many pieces

of wood and which sizes should be cut from larger pieces to produce the least amount of scraps. Materials offer flexibility as students choose strategies to help with solutions, including hundreds grids, strip diagrams, or other models.

- In the "Unit 5, Lesson 8" "Exploration" Section, students match twelve equations and inequalities with values that make the statements true. The "Teaching Hints" Section prompts students to use number lines to show how a given value relates to the solution. The "Explanation" portion of the lesson refers students to the *TEKS Companion Guide* ("ePub"). To begin, the "Tell Me More" Section teaches students how to solve problems using models or algebraic reasoning and provides flexibility as students learn to choose different strategies to use with independent practice problems. Two stepped-out examples accurately model the algorithm, reminding students to use order of operations to simplify the expression. The first example asks students to check a solution to see if it works for an equation, and the second example provides a real-world situation as a word problem. 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 "$x + 7 = 10$, when x is 17" and must determine if the solution is true. Students continue to verify solutions in more complex problems: when given an equation ($2.9g = 42.63$), students solve to determine which of two solutions is accurate ($g = 39.73$ or $g = 14.7$). The final portion of the lesson, the "Performance Task," "Amusement Park," presents students with the task of using inequalities or other appropriate representations to determine which pair of potential riders can join the two adult riders without surpassing weight limits. Materials offer flexibility as students choose strategies to help with solutions, including hundreds grids, strip diagrams, or other models.

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 use 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 6 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 3, Lesson 4" "Exploration" Section, students watch the instructional video and respond to a prompt in their math journal: "Use a number line and two-color counters to show how 7 and -7 are opposites." After explaining, students compare answers with peers. Materials provide opportunities to evaluate procedures and solutions for efficiency in the "Tell Me More" Section, the first page of each lesson of the *TEKS Companion Guide*. Specifically in the "Unit 3, Lesson 5" "Explanation" Section, materials explain that multiplication can be thought of in different ways: scaling a quantity, representing area, or arrays with rows and columns. Students analyze models and processes of this math concept in algebra tiles, number lines, and abstract representations for solutions. Questions for teachers in the "Explanation" Section prompt students to think critically. For example, in the "Unit 4, Lesson 4" "Explanation" Section, questions promote flexibility by asking students how they "might use" a percentage bar or a number line to represent the fraction.
- Materials provide opportunities to evaluate procedures and solutions for efficiency in "Performance Tasks." For example, in the "Unit 6, Lesson 2" "Performance Task," "Cell Phone," students must write the equation, determine the rule to describe the relationship between variables, and solve the equation. In the end, students evaluate their solutions and justify their reasoning. The tasks are intentionally designed for flexibility with students solving problems using multiple appropriate strategies. For instance, in the "Unit 9, Lesson 1" "Performance Task," "Buying a Chair," students calculate possible prices for a chair based on two scenarios. After the task, students consider possible prices depending on interest and money saved and 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 6 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 6 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 6 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 2, Lesson 1" "Teaching Hints" Section provides an example of a visual approach for teachers to model with students. Along with the visual, materials say, "What is 1/2 of 3/8? Draw a model for ⅜. Vertically break the square into halves and shade ½. Three out of sixteen equal-sized parts are now double-shaded." In "Unit 7, Lesson 3," the "Instructional Hints" Section explains that students understand area formulas better when they know where the formulas come from. Teachers are encouraged to model the area formula for a triangle and trapezoid showing how the formulas developed. 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 1, Lesson 5" "Exploration" Section provides multiple prompts, including the following: "How could you write a proportion to represent this situation? What scale factor could you use to solve the proportion?"
- The *Grade 6 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 3," explicit instructions guide students through four examples, solving for areas and dimensions of triangles and trapezoids. In the first example, students are prompted and then guided to "Write an equation that can be used to determine the area of the stage floor and then solve for this measure." In each lesson's "Performance Task" Section, "Teacher Notes" provide links that detail each task. For example, the "Unit 7, Lesson 3" "Performance Task," "Park Space," 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 student knowledge from grades 2 and 3 as related to shapes and formulas. Next, materials provide the teacher with a stepped-out "Possible Solution," including diagrams and written explanations to accompany algorithms. At the end of the teacher materials, teachers are provided with tips to look for as students approach task completion. For example, in this task, teachers check for correct calculations from individual parts of the task to ensure a missed calculation does not cause an error in the total 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 6 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 6 (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 2 Teacher Materials," the "Unit Overview" connects concepts from grades 4 and 5 (adding/subtracting fractions, multiplying fractions by whole numbers, etc.) to grade 6 "Unit 2" materials (all four operations with all forms of positive fractions and decimals). Teacher materials at the unit level also provide a clear explanation of mathematical concepts—the "why" behind mathematical procedures. For instance, the "Unit 5" overview states, "Students will build on prior experiences to write, model, and solve one-step equations involving one variable and then represent the solutions on a number line." Materials clearly state how these same skills and content will need to be applied by students in future grades; in grade 8, "students solve equations with the same variable on both sides of the equal sign."
- Grade 6 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 1, Lesson 1" "Learning Outcomes" Section states, "I can represent a ratio using a concrete model, fraction, or decimal. I can represent a percent using a concrete model, fraction, or decimal." 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 8, Lesson 2" "Tell Me More" Section defines boxplots (standard 6.12A), first quartile, median, and third quartile. Students are shown how to create boxplots using the five-number summary: the minimum value, the first quartile, the median, the third quartile, and the maximum value. Two stepped-out examples model solutions using real-world situations and data to create boxplots following the same procedure: the five-number summary.

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 6 (Teacher Course*), the "Teaching Hints" Section offers strategies and explanations that support teachers in conveying concepts to students. In the "Unit 7, Lesson 1" "Teaching Hints" Section, concrete models prove to students that the interior angles of a triangle add up to 180 degrees. Teachers trace a triangle on paper and color code each of the three angles. Next, each angle is torn out and placed with the vertices together, with no overlapping. The result is a straight line. Next, each angle is measured using a protractor; the sum of the three measures equals 180 degrees, a straight line. During the lesson's "Exploration" Section, students use visual representations of triangles to complete the "Blackline Masters" independent practice. Students develop conceptual knowledge of angles in a triangle before moving on to abstract representations, numeric expressions, and algorithms.
- The student activities move from pictorial representations to abstract representations as conceptual knowledge develops. In the "Unit 1, Lesson 5" "Exploration" Section, students use a variety of models to understand percentages, including percent bars, proportional fractions, pie graphs, and hundreds grids. At first, "Blackline Masters" materials provide completed percent bars and set-up proportions for students. Then students receive blank percent bars that must be completed, and eventually, students are given the problem without visual support. As the lesson moves into the "Explanation" Section, the "Instructional Hints" state, "Use visual models to represent percents. Example 1 showcases a percent bar that could be used in the You Try It! problem. Example 2 showcases a hundreds grid to represent the part and whole and then determine the percent."
- In the *Grade 6 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, in "Unit 3, Lesson 4," students use two-color counters and number lines to deepen their knowledge of adding and subtracting positive and negative numbers. For example, in the "Unit 1, Lesson 1" "Tell Me More" Section, students use grid models to understand percents and ratios. Students solve real-world problems and use the model to support their solutions.

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

- *Math - Grade 6 (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 4, Lesson 1" "Exploration" Section, students complete independent practice guided by a Google Slides presentation. To understand ratios, students use Cuisenaire® or proportionality rods to create models of ratios and then connect the concept to the abstract representation, writing the ratio as a fraction. Next, students look at a recipe and determine which proportion rod represents the amount of each ingredient. Questions guide students to move from the visual representation to the abstract by presenting questions like, "How much powdered sugar is in a serving for 1 person?" Supports in the "Unit 6, Lesson 3" "Exploration" Section include an instructional video for additive and multiplicative sets of data, where the symbolic equation and the table of data are side by side to show connections. Data is moved from the table representation to a line graph to demonstrate how *x* and *y* create ordered pairs and connect to a linear function.
- 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 3, Lesson 4" "Teaching Hints" Section explains "how the concrete or visual models (counters and number lines) used to add or subtract integers connect to the procedures" used to solve numerical expressions. As students begin independent practice, the "Explanation" Section of the "ePub" supports students in moving information from created visual representations (counters and number lines) to symbolic and algorithmic representations, where students choose a model that best fits the situation. Student activity instructions suggest students use two-color counters to create representations for a few problems, then move to a number line for a few problems, and use algorithms to solve the rest. Instructions prompt the teacher to continue using concrete models—counters and number lines—with students as needed, moving them to abstract concepts.
- "Performance Tasks" from each lesson require students to apply mathematical concepts and encourage students to connect representational models to abstract concepts using real-world situations. For example, the "Unit 1, Lesson 5" "Performance Task," "Garden Expansion," requires students to review information about the area of a flower garden and use percent calculations to determine the area of the garden when it is increased. Students connect the verbal information to a visual representation, a percent bar, or other visual model. The "Unit 7, Lesson 2" "Performance Task," "Swimming Pools," provides students with a drawing of a swimming pool and its feature, an island. Students calculate the area of the pool subtracting the area of the island. They must also calculate the percent of the pool the island takes up. By drawing and labeling the pool and island, students create a visual representation of the situation and connect it to the numerical equations that represent the task.

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 4, Lesson 1" "Exploration" Section, the instructional video introduces new vocabulary to students with visuals and manipulatives. For example, two rectangles are drawn and separated into equivalent sections. The video creates the ratio in three ways so that students understand more than one expression: "2 to 3," "2:3," and "⅔." Students explore examples that use manipulatives to understand that Cuisenaire® rods and tables can also show ratios. The *Grade 6 TEKS Companion Guide* begins each "Explanation" Section with the "Tell Me More" Section, where students are provided visual representations and written definitions for each bolded vocabulary term. In the "Unit 3, Lesson 2" "Explanation" Section, academic vocabulary includes *rational numbers*, *integers*, and *whole numbers*. Students are provided bulleted lists of each term and its definition, including characteristics. Students also complete a Venn diagram to show relationships between these concepts. In the "Unit 6, Lesson 1" "Explanation" Section, academic vocabulary includes *coordinate plane*, *origin*, *quadrants*, *axes*, *x-axis*, *y-axis*, and *ordered pair*. Students are

provided definitions written in paragraph form, relating these terms to the overall concept of graphing. Two visual representations of coordinate planes provide labels of vocabulary terms to develop student understanding.

- The *Grade 6 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 designed to develop academic language that includes the following sections: definition in the student's own words, examples, non-examples, and facts/characteristics related to the word. In each grade 6 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 4, Lesson 1," vocabulary related to rates and ratios includes *part*, *part-to-part ratio*, *part-to-whole ratio*, *percent*, *ratio*, *rate*, *unit rate*, and *whole*. In "Unit 5, Lesson 3," partially completed Frayer model templates are provided for *composite number*, *equivalent number sentence*, *exponent*, *prime factorization*, and *prime number*. The link to *equation* states the definition as "two equal expressions." In the example, a table provides data from a function with the following related equation: $t = 2 \times c$. The facts/characteristics listed state, "Has an equal sign." Non-examples are left blank for the student to fill in.

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

- *Math - Grade 6 (Teacher Course)* provides embedded guidance for teachers to scaffold and support academic mathematical vocabulary by providing clear guidance on vocabulary procedures. The *Grade 6 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 them 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 5, Lesson 3" provides a link to *equation*, which states the definition as "two equal expressions." In the example, a table provides data from a function with the following related equation: $t = 2 \times c$. The facts/characteristics listed state, "Has an equal sign." 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 6 (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 6, Lesson 1" "Exploration" Section provides sentence stems to emergent bilingual students to build self-corrective techniques and monitor their oral language production. Sentence stems include the following: "What I hear you say is . . ." and "Please say that again." 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 connecting prior knowledge of previously learned vocabulary: "Ask students to write or speak about the key features of a dot plot and a stem-and-leaf plot." The "Unit 8, Lesson 2" "Instructional Hints" Section states, "Consider asking students to make a Venn diagram to compare and contrast attributes of histograms and box plots."
- 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 3, Lesson 1" "Explanation" Section, students learn about integers and build their vocabulary with the words *number line*, *positive numbers*, *negative numbers*, *absolute value*, and *opposite*. 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: "A number is shown plotted on the number line. What is the value of the number shown? What is the opposite value of the number shown? What is the absolute value of the number shown?" For the "Explicit Instruction Option," teachers guide students to answer each question. In the "Unit 6, Lesson 1" "Explanation" Section, built-in questions prompt teachers to get students to discuss mathematical concepts: "Which value represents the x-coordinate? Which value represents the y-coordinate?"

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 6 (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 in guiding mathematical discourse during each lesson's "Exploration" Section. The "Teaching Hints" Section from "Unit 3, Lesson 1" includes specific details about connecting vocabulary from students' prior learning and building the terms into grade 6 mathematical concepts. "Make explicit the connections between the sign of the number and its direction from zero on the number line. Make explicit the connections between the absolute value of the number and its distance from zero on the number line." The words *sign*, *direction*, *absolute value*, and *distance* are all color-coded to show their connection and importance. Through lesson activities, students engage with each vocabulary word in various ways to build their mathematical toolkits over time.

- 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 6 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. Students engage in various conversations to refine their math language and develop a deeper understanding of math terminology. For example, "Unit 9, Lesson 1" includes specific prompts for student discourse to confirm students' understanding of increasingly complex and elaborate spoken language. Using a structured conversation protocol gives each student time to talk about the lesson materials and listen to their partner speak. Sentence stems summarize the concepts in the video and allow students to develop their math language toolkit. For example, the sentence stems include, "The balance column keeps track of ____." and "A transfer is a transaction in which ____." It also includes teacher guidance for clarifying questions, such as, "When you say deposit/withdrawal, what do you mean?"
- 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 rational numbers, whole numbers, and integers, teachers prompt thinking and promote discourse by asking, "Are all integers rational numbers? How do you know?" In the "Unit 6, Lesson 1" "Explanation" Section, students learn to graph points in all four quadrants. As the teacher facilitates mastery, one question materials provide is, "What does the sign of the coordinate tell you about the direction from the origin?" Student responses require refined math language and proper syntactic structures. Teachers incorporate student responses to delve deeper, clarify, and redirect. For example, in the "Unit 6, Lesson 2" instructional video, students hear about additive and multiplicative relationships; then, they make a t-chart listing the characteristics of each, incorporating lesson vocabulary.

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 6 (Teacher Course*) presents a *Grade 6 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 6 Scope and Sequence*, the TEKS alignment chart states that 6.1E will be incorporated into "Units 1, 3, 5, and 8." "Unit 4" incorporates standards 6.1D, 6.1E, and 6.1G.
- Each unit document identifies the TEKS and content for each lesson, process standards, and prior TEKS from previous grades. In the grade 6 "Unit 1" document, process standards 6.1A, 6.1D, and 6.1E 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 6.1B, 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 use 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 6 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 6 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 6 Mathematics Teacher's Guide* states that the process TEKS listed within each lesson are specifically targeted.

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

- There is a downloadable document for each unit with all the TEKS, including the process standards. They are listed with the content TEKS. For example, in the downloadable grade 6 "Unit 4" document, TEKS 6.1B, 6.1C, and 6.1F are listed with the content TEKS.
- The grade 6 "Unit Overview" describes how process standards are incorporated throughout the unit. For example, "Unit 1" states, "Students then use these ideas to solve meaningful real-world problems involving multiple representations of rational numbers in a variety of contexts, including money," which is process TEKS 6.1A. Grade 6 "Unit Overview" materials describe how process standards are connected throughout the unit. For example, "Unit 6" explains that students extend their prior knowledge of only one quadrant in a coordinate system to all four quadrants as they learn about integers and negative rational numbers in this unit. Students will also graph in all four quadrants to make representations of additive and multiplicative relationships.

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

- *Math - Grade 6 (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 6.1A, the "Unit 9, Lesson 1" "Overview of Process Standards" explains that students will relate entries in a check register to real-world situations and apply addition, subtraction, and multiplication of decimal numbers in a financial context.
- The following lessons apply standard 6.1E in lesson content. The "Unit 3, Lesson 2" "Overview of Process Standards" states that students "will create and use representations to organize, record, and communicate mathematical ideas." Specifically, students will use a Venn diagram to show the relationships among sets and subsets: whole numbers, integers, and rational numbers. The "Unit 5, Lesson 1" "Overview of Process Standards" explains that as students

solve problems involving factorization, they will communicate mathematical ideas by creating and using representations, including factor trees to record prime factors of a decomposed composite number.

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 6 (Teacher Course)* materials explain opportunities throughout the course where students think mathematically and make sense of grade-level concepts. 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 1, Lesson 1," the Texas Essential Knowledge and Skills (TEKS) includes process standard 6.1E and content standard 6.4E.
- 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 6, Lesson 4" "Exploration" Section, teachers offer students opportunities to restate and summarize spoken information, answer questions, work with classmates, and take notes. These high-level skills provide students time to think mathematically. In the "Unit 8, Lesson 5" "Exploration" Section, students interpret, analyze, and create percentage bar graphs.
- The *Grade 6 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 use a 10x10 grid to show 100%, ¼, 75%, and ⅜ or 60%. The "Explanation" Section guides teachers to 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 2," one advancing question asks, "How might you use a number line to represent this number?" 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 use 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 2, Lesson 3," the video explains and models fraction division; the journal entry provides a real-world problem and asks students to solve it. Students resume the video to check for accuracy. In the "Unit 7, Lesson 3" "Exploration" Section, students use tangible triangles and trapezoids and calculate each shape’s area. Students are challenged to justify in the following ways: represent an equation that could be used to determine the area, sketch their triangle and trapezoid that would have the same area, and measure the dimensions of shapes. Finally, students present their solutions to peers and explain how they calculated the area.
- "Performance Tasks" at the end of each lesson include teacher notes with question stems for probing and supporting students. "Performance Tasks" require students to either explain or justify that there are multiple ways to solve a problem. For example, the "Unit 3, Lesson 5" "Performance Task" asks students to use a number line representing a bus route along the road to solve problems using operations with integers where the points are associated with locations. Students' strategies include mental math, algorithmic computation, concrete or pictorial models, the provided number line, or any other strategy. The teacher "look fors" in the student's response include identifying the solution strategy. In the "Unit 4, Lesson 1" "Performance Task," students are asked to determine the rate of various Olympic swimmers and analyze their times. Students create ratios and determine the unit rate of length and time. They then justify their reasoning for each question, like, "What is the range of times in minutes for the top 3 finishers?" Students are encouraged to use a number line, strip diagram, or other strategy when comparing numbers.

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 6 (Teacher Course)* includes instructional videos. Videos provide journal time for students to write and discuss math with peers and teachers. For example, in "Unit 4, Lesson 4," the journal entry provides a real-world problem about finding the percentages of numbers. Students must solve the calculation and determine which answer is correct. After completing the problem, students resume the video to check for accuracy. The "Unit 3, Lesson 2" "Exploration" video provides students a sentence to copy in their math journals, explaining how to solve a division of fractions problem. They use this sentence to discuss their mathematical thinking, share different solution strategies, make connections between strategies, and participate in collaborative learning with peers.
- 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 7, Lesson 2" gives teacher guidance to have students create and write anchor charts to display around the classroom. In "Unit 8, Lesson 1," the instructional hint suggests that the teacher provide discussion time so students write or speak about the key features of a dot plot and a stem-and-leaf plot.
- The "Exploration" Sections provide support for emergent bilingual students that require students to discuss math with peers and teachers and deepen their understanding in different ways. The "Unit 3, Lesson 3" "Exploration" Section provides teachers with scaffolding vocabulary by giving students sentence stems to begin their discussions: "I heard/saw the word/phrase ____. I can use it when... I heard/saw the word/phrase ____. I would probably not use it when ____ because." "Unit 9, Lesson 1" uses a structured conversation protocol that gives each student time to speak on the topic and listen to peers. Sentence stems help summarize the concepts in the video, allowing students to make sense of math. For example, the sentence stems include, "The balance column keeps track of ____. A transfer is a transaction in which ____." It also includes teacher guidance for clarifying questions, such as, "When you say deposit/withdrawal, what do you mean?"

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 6 (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 "Unit 1, Lesson 4," students work with decimals, fractions, and percents. Students create a table with their computations and then explain "How is a decimal related to its fraction, percent, and monetary representation?" In the "Unit 1, Lesson 5" "Exploration" Section, as students work in small groups on the "Blackline Masters" activity, students explain, "What is this problem about?" and "How could you write a proportion to represent this situation?" Student explanations focus the conversation and 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 5, Lesson 3," as students solve algebraic equations, the teacher asks, "When you say combine terms, what do you mean?" and "Which object represents *x*? Which object represents a constant or a number?" 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. In the "Unit 5, Lesson 3" "Performance Task," "Lab Partners," students must solve mathematical equations to find a solution to a real-world situation: a teacher is putting students in groups using equations. 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 6 Mathematics Teacher's Guide* includes a "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 kind of model could you use to represent this number?" 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 offers feedback for student responses. For example, the "Unit 3, Lesson 1" "Performance Task," "Temperatures" explains to the teacher that students need to be aware that unknown temperatures might be positive or negative because the absolute value has already been given. "Look fors" provide a bulleted list to guide teachers in finding areas for feedback. An example warns teachers to "look for... correct operations with rational numbers."
- The *Grade 6 Mathematics Teacher's Guide* includes "Common Misconceptions in Grade 6 Mathematics." The guide includes seven misconceptions students may make throughout the year, such as, "Students may believe it is necessary to line up the decimal points to multiply two decimals or think common denominators are required for all operations on fractions." 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 5, Lesson 3" "Exploration" Section includes the following "Instructional Hint:" "Equivalent expressions are not necessarily always 'reduced' to lowest terms." Materials prompt teachers

to provide time for students to narrate, describe, and explain what they know about equivalent expressions. To offer feedback on student responses, materials provide the following questions to nudge students: "How would you describe what two equivalent expressions look like?" and "What else can you say about equivalent expressions?" These prompts help teachers directly address known misconceptions and give in-the-moment feedback. In "Unit 7, Lesson 2," the "Teaching Hints" Section guides teachers to invest time and model how the area formula works for a parallelogram. Providing visual representations solidifies student conceptual development as well as prevents or gets rid of misconceptions.