

Publisher Name	Program Name
Texas Education Agency, Open Education Resources	Bluebonnet Learning Grade 5 Math, Edition 1
Subject	Grade Level
Mathematics	5

Texas Essential Knowledge and Skills (TEKS) Coverage:	100%
English Language Proficiency Standards (ELPS) Coverage:	100%
<u>Quality Review Overall Score:</u>	223 / 227

Quality Review Summary

Rubric Section	Quality Rating
1. Intentional Instructional Design	50 / 53
2. Progress Monitoring	28 / 28
3. Supports for All Learners	31 / 32
4. Depth and Coherence of Key Concepts	23 / 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.
- 1.2 Unit-Level Design: Materials include comprehensive unit overviews that provide background content knowledge and academic vocabulary necessary for effective teaching and contain supports for families in both Spanish and English with suggestions for supporting their student's progress.
- 2.1 Instructional Assessments: Materials include a variety of instructional assessments at the unit and lesson levels, including diagnostic, formative, and summative assessments with varied tasks and questions, along with definitions and purposes, teacher guidance for consistent administration, alignment to TEKS and objectives, and standards-aligned items at different levels of complexity.
- 2.2 Data Analysis and Progress Monitoring: Materials include instructional assessments and scoring information that provide

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

- 3.1 Differentiation and Scaffolds: Materials include teacher guidance for differentiated instruction, activities, and scaffolded lessons for students who have not yet reached proficiency, pre-teaching or embedded supports for unfamiliar vocabulary and references in text, and guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.
- 3.2 Instructional Methods: Materials include prompts and guidance to support teachers in modeling, explaining, and directly and explicitly communicating concepts to be learned. They provide teacher guidance and recommendations for effective lesson delivery using various instructional approaches and support multiple types of practice with guidance on recommended structures, such as whole group, small group, and individual settings, to ensure effective implementation.
- 4.1 Depth of Key Concepts: Materials provide practice opportunities and instructional assessments that require students to demonstrate depth of understanding aligned to the TEKS, with questions and tasks that progressively increase in rigor and complexity, leading to grade-level proficiency in mathematics standards.
- 4.2 Coherence of Key Concepts: Materials demonstrate coherence across courses and grade bands through a logically sequenced scope and sequence, explicitly connecting patterns, big ideas, and relationships between mathematical concepts, linking content and language across grade levels, and connecting students' prior knowledge to new mathematical knowledge and skills.
- 4.3 Spaced and Interleaved Practice: Materials provide spaced retrieval and interleaved practice opportunities with previously learned skills and concepts across lessons and units.
- 5.1 Development of Conceptual Understanding: Materials include questions and tasks that require students to interpret, analyze, and evaluate various models for mathematical concepts, create models to represent mathematical situations, and apply conceptual understanding to new problem situations and contexts.
- 5.2 Development of Fluency: Materials provide tasks designed to build student automaticity and fluency for grade-level tasks, offer opportunities to practice efficient and accurate mathematical procedures, evaluate procedures for efficiency and accuracy, and include embedded supports for teachers to guide students toward more efficient approaches.
- 5.3 Balance of Conceptual Understanding and Procedural Fluency: Materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed, include questions and tasks that use concrete models, pictorial representations, and abstract representations, and provide

supports for students in connecting and explaining these models to abstract concepts.

- 5.4 Development of Academic Mathematical Language: Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, and language strategies, with embedded teacher guidance on scaffolding vocabulary, syntax, and discourse, and supporting mathematical conversations to refine and use math language.
- 5.5 Process Standards Connections: Materials integrate process standards appropriately, providing descriptions of how they are incorporated and connected throughout the course, within each unit, and in each lesson.
- 6.1 Student Self-Efficacy: Materials provide opportunities for students to think mathematically, persevere through problem-solving, and make sense of mathematics, while supporting them in understanding multiple ways to solve problems and

requiring them to engage with math through doing, writing, and discussion.

- 6.2 Facilitating Productive Struggle: Materials support teachers in guiding students to share and reflect on their problem-solving approaches, offering prompts and guidance for providing explanatory feedback based on student responses and anticipated misconceptions.

Challenges

- 1.3 Lesson-Level Design: 1.3 Lesson-Level Design: Materials do not include comprehensive, structured, detailed lesson plans that include daily objectives required to meet language standards of the lesson.
- 3.3 Support for Emergent Bilingual Students: The materials do not include teacher guidance on providing linguistic accommodations for various levels of language proficiency as defined by the ELPS.

Summary

Bluebonnet Learning is a mathematics 3–5 program. The instructional materials offer a well-organized and comprehensive approach to grade 5 math instruction, featuring a detailed scope and sequence that clearly outlines the key concepts and knowledge to be covered across various modules. Each module is thoughtfully supported by pacing guides that can be adapted to different instructional calendars, ensuring seamless implementation regardless of available instructional days. The program also includes thorough module overviews that provide essential background knowledge, academic vocabulary, and address common misconceptions, equipping teachers to teach concepts effectively.

Campus and district instructional leaders should consider the following:

- The materials offer assessment tasks that guide students toward proficiency, supported by rubrics and exemplar responses to aid in scoring and providing feedback. Margin notes throughout the lessons ensure accessibility for all learners, while Module Overviews highlight foundational standards and suggest using the Succeed resource from prior grades for intervention. The materials include a variety of instructional strategies to meet different student

needs, although separate small group lessons for intervention or extension are not explicitly included.

- The program excels in helping students engage with a vertically aligned problem-solving model, encouraging critical and flexible thinking about mathematics. It integrates various ways to assess and support emerging bilingual learners, with embedded ELPS strategies. The program’s consistent routines, lesson structure, and daily opportunities for discourse foster high-level mathematical thinking. Tasks within the program build in complexity, following the concrete, representational, and abstract approach to deepen understanding of key grade-level topics. Over time, the materials tell a cohesive and coherent story of mathematics, both within and across grade levels.

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 TEKS, 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, 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.

- The materials include a section titled "Grade 5 Year-at-a-Glance/Scope and Sequence" located in the *Course Guide*, which outlines each module's topics, the number of instructional days for each module, as well as concepts, knowledge, and skills covered in each module.
- The materials include a pacing guide located in the *Course Guide*, organized by process standards, TEKS, and ELPS, with focus standards highlighted in bold. Additionally, the pacing guide offers a rationale for the instructional order within grade 5 and how it connects to learning in grades K–2.
- In the "Grade 5 Standards by Lesson" section of the *Course Guide*, educators find a table titled "Grade 5 English Language Proficiency Standards by Lesson per Module," detailing the ELPS standards addressed in each module and lesson.

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 pacing guide located in the "Grade 5 Year-at-a-Glance/Scope and Sequence," summarizing the suggested number of instructional days for each module and a 165-day instructional calendar. The materials include an "Overview of Module Topics" and a "Lesson Objectives" chart located in the "Module Overview" section at the beginning of each teacher edition. The overview is organized by topic and includes TEKS, ELPS, lesson numbers, objectives, and the suggested number of days, covering a total of 165 instructional days.
- The materials include an "Additional Days School Year" (ADSY) module to support the effective implementation of extending the 165-day instructional calendar by up to 30 days, which supports schools with various instructional calendars.

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

- The *Course Guide's* "Sequence of Grade 5 Modules Aligned with TEKS" section provides a rationale for the order of the modules, explaining how the knowledge and skills in each module build upon learning and make connections across the units. For instance, the Rationale for Module Sequence says, "Students' work with fractions is applied to area and volume in Module 5."
- Each module begins with an overview that explains the rationale behind the order of topics and lessons. It highlights how each topic builds on prior knowledge and prepares students for subsequent concepts. For example, the overview in Module 1 states "In Module 1, students' understandings of the patterns in the base ten system are extended from Grade 4's work with place value to include decimals to the thousandths place in Topic A."

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

- The materials include a *K–5 Math Program and Implementation Guide*, which includes a section that explains the module structure and lesson structure of each module. The lesson structure overview provides a "Lesson Internalization Protocol," which includes a step-by-step process for understanding each lesson before teaching. In addition, materials include explanations of fluency practice, application problems, concept development, problem sets, student debriefs, and exit tickets.
- The *K–5 Math Program and Implementation Guide* features a "Teacher Module Internalization Protocol," providing step-by-step guidance for teachers to thoroughly understand each module before teaching. This protocol facilitates a four-step process to grasp the module's objectives, sequence, and pacing of activities. It enables comprehensive preparation for teaching by meticulously exploring and organizing instructional resources.

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

- The materials include two coach guides aligned with the Teacher Module Internalization Protocol and Teacher Lesson Internalization Protocol templates. These guides support administrators and coaches in assisting teachers with module implementation and internalization, providing a structured approach with a stated purpose for each step, recommended timing, and optional ideas for further exploration.
- An "Observation Tool" template located in the *K–5 Math Program and Implementation Guide* provides administrators and coaches with support for the implementation of course materials with fidelity. This tool offers non-evaluative feedback to teachers on their implementation progress. In addition, the observation tool serves as a resource for documenting observations of teachers' instructional practices and material implementation, with sections outlining specific activities to observe before, during, and after classroom visits.
- The grade 5 *Course Guide* features a "Manipulatives and Supplies Lists" section, offering coaches and administrators a comprehensive list necessary to support fidelity in implementing course materials.
- The "Student Work Analysis Protocol" found in the *K–5 Math Program and Implementation Guide* utilizes a six-step process to analyze student work samples. It guides coaches and administrators in understanding student thinking and identifying learning strengths and gaps through reflective questions.

Intentional Instructional Design

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

The materials include comprehensive unit overviews that provide the background content knowledge and academic vocabulary necessary to effectively teach the concepts in the unit. Materials contain supports for families in both Spanish and English for each unit with suggestions on supporting the progress of their student.

Evidence includes, but is not limited to:

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

- The materials begin each module with a comprehensive overview that provides essential background knowledge for effective teaching of new concepts. These overviews are structured by topic, featuring tables with common student misconceptions and visuals illustrating skills and strategies in each module. For instance, the "Module 2 Overview" includes visuals demonstrating how to use place value disks to divide multi-digit whole numbers.
- The materials feature a terminology section at the beginning of each module's overview. This section includes bullet lists of new and recently introduced terms, accompanied by concise definitions and visuals. It also includes Spanish cognates where applicable. Teachers utilize separate lists for "New or Recently Introduced Terms" and "Familiar Terms and Symbols," offering guidance on effectively teaching the academic vocabulary integral to the module's concepts.
- The "Topic Overview" section of each module provides detailed information on focus TEKS and guidance for every topic alongside vertical alignment connections to grade 5 math concepts. For example, in grade 5, Module 1 of the *Teacher Edition*, "Topic A: Prime and Composite Numbers," the coherence section aligns with grade 3, Module 3, grade 4, Module 3, and grade 5, Module 3 of the materials. No vertical alignment coherence beyond grade 5 is present in any of the topic overviews contained in the grade 5 course.

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

- The grade 5 Course Guide includes a "Tips for Families" section for each module, available in both English and Spanish. These tips provide families with an overview of key concepts covered in the module, strategies for supporting learning at home, and vocabulary definitions.

Each tip sheet includes a checklist to monitor student progress and a section titled "Additional Ways to Help at Home," which offers families visual models demonstrating concepts and strategies. These strategies include using everyday items like crackers, crayons, or toys to reinforce mathematical understanding.

- The materials feature a Family Guide containing a letter that explains the program's purpose and resources available for families to support their students. This guide also includes sample problems demonstrating various problem-solving approaches. The family letter emphasizes the importance of teaching students multiple methods to solve math problems, stating "We limit our students if we give them only one set of tools to solve math problems. The three examples above show what is possible when students learn multiple approaches." The guide is provided in both English and Spanish.
- The materials feature "Homework Helpers" in the Succeed student workbooks, offering step-by-step explanations for each homework assignment. This resource assists students in understanding and solving problems effectively. Additionally, the K–5 Math Family Guide outlines resources like Homework Helpers and "Tips for Families" to aid families in supporting their students during homework. These are available in both English and Spanish.

Intentional Instructional Design

1.3	Lesson-Level Design	31/34
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.	27/30
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 standards of the lesson. Materials include comprehensive, structured, detailed lesson plans that include questions, tasks, materials, and instructional assessments required to meet the language standards of the lesson. Materials do not include comprehensive, structured, detailed lesson plans that include daily objectives required to meet language standards of the lesson. Materials include a lesson overview outlining the suggested timing for each lesson component. Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson. Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, enrichment).

Evidence includes, but is not limited to:

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

- The *Teacher Edition* for Modules 1–7 includes a section at the beginning of each lesson called "Suggested Lesson Structure." This section is organized into four parts: "Fluency Practice," "Application Problems," "Concept Development," and "Student Debrief." Each lesson begins with a specific learning objective and follows a recommended bullet-pointed structure detailing each component and its allocated time. Comprehensive teacher guidance is provided for each lesson component, including step-by-step instructions for activities, questions, and possible student responses. Each lesson contains a list of materials required for each task within a lesson, if applicable. Some lessons also include additional teacher guidance in the form of margin notes offering support for language and scaffolding activities. Materials include language standards by module and lesson in the *Course Guide* and language standards by topic in the "Module Overview of Module Topics and Lesson Objectives" table. Language standards do not appear at the lesson level as a part of comprehensive, detailed lesson plans.

- Instructional assessments are integrated throughout the course materials. Each module includes a "Mid-Module Assessment," "End-of-Module Assessment," and an "Exit Ticket" for each lesson. Detailed teacher guidance for informal instructional assessment opportunities is provided within individual lesson components.
- The materials include a list of teacher questions and potential student responses within daily lesson plans, along with key academic vocabulary for each lesson. For example, Module 2, Lesson 24, Student Debrief includes the following question: "Did your initial estimates work for every example in Problem (1)? Why or why not?"

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

- Individual lessons in the materials follow a consistent framework and include a Suggested Lesson Structure found at the beginning of each lesson, which provides teacher guidance for the timing of each component in the lesson cycle. The time allotted for each lesson component within the Suggested Lesson Structure varies slightly among the lessons. Every lesson cycle in the materials is designed to be 60 minutes in length. Each lesson displays a pie chart dividing each component of the lesson and the number of suggested minutes for that component. For example, in Module 6, Lesson 1, the Suggested Lesson Structure is Fluency Practice for 12 minutes, Application Problem for six minutes, Concept Development for 32 minutes, and Student Debrief for 10 minutes, for a total time of 60 minutes.
- The materials provide guidance on how long to spend on each Fluency Practice activity included in each lesson of the Module Teacher Edition. There may be more than one fluency activity that needs to be done within a specific allotted time frame. For example, in lesson 1 of Module 6, there are 2 fluency activities to complete within 12 minutes. One activity has a 4-minute suggested time allotment and the other has an 8-minute suggested time allotment.

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

- The Grade 5 Course Guide includes a comprehensive Manipulatives and Supplies List that details the type and quantity of student materials. Each Module in the materials provides a list of Suggested Tools and Representations in its Module Overview, specifying student materials required for the module. This organized table format aids teachers in planning and preparation, detailing each item's identification, quantity, and description. Teachers can utilize these charts to ensure they have all the necessary materials well in advance.
- Each component section at the beginning of individual lessons includes a list of materials needed. Materials designated for teachers are indicated with (T), while those for students are marked with (S). For example, certain fluency activities may require students to have a personal whiteboard, noted as "(S) personal whiteboard" beneath the specific activity.
- The "Lesson Overview Materials List" in each Module Overview includes a comprehensive list of the teacher and student materials necessary to effectively deliver each lesson in the module. The list of materials is in a table by lesson and separated by teacher and student materials.

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

- The *K–5 Math Program and Implementation Guide* contains a section titled "Homework Helpers," which includes an overview of homework guidance and instructions for solving problems similar to those found in lessons. Each homework practice set in Succeed is supported by its corresponding Homework Helper.
- The *K–5 Math Program and Implementation Guide* includes guidance on homework usage, found in the Lesson Structure section. It emphasizes that homework aims to reinforce understanding and confidence with previously learned material rather than introducing new concepts. Homework assignments are located in the student's Succeed workbook and align closely with lesson concept development. Each lesson offers optional homework practice and advice on selecting the most effective homework materials for extended practice. Alternatively, the *Implementation Guide* suggests utilizing the lesson's Fluency component for additional practice outside of school hours.
- Lessons included in the materials periodically provide teacher suggestions for student extension and enrichment opportunities within the individual lesson components, noted in the Module Teacher Editions in boxes entitled "Notes on Multiple Means of Engagement (MME)." For example, in Module 2, the Concept Development in Lesson 24 includes an MME box that states, in part, "Students could also be asked, "What is the largest the whole could be and still have a quotient of 3?" However, student extension and enrichment opportunities are not present in every lesson within the course.

Progress Monitoring

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

Evidence includes, but is not limited to:

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

- The grade 5 *Assessments Teacher Edition* provides a range of assessments, including formative, summative, and diagnostic types, featuring multiple-choice questions, short-constructed responses, and questions of varying complexity. Tasks can be administered either on paper or online, including short answer, inline, fill-in-the-blank, multiple choice, and multi-select questions. The materials include a variety of instructional assessments that vary in types of tasks and questions. For example, in Module 1, Lesson 1, the "Exit Ticket" and "Problem Set" are two different types of tasks with different questions. These also vary compared to the "Module 1 End-of-Module Assessment."
- The grade 5 *Assessments Teacher Edition* incorporates summative assessments at the unit level through Mid-Module and End-of-Module Assessment Tasks, which include multiple-choice and short-constructed response questions. Teacher guidance in the *Math Program and Implementation Guide* indicates these assessments can serve both formative and summative purposes.
- The grade 5 *Assessments Teacher Edition* suggests that some questions within "Mid-Module Assessment Tasks" can serve diagnostically by assessing TEKS that recur in "End-of-Module Assessment Tasks." According to the *Assessment* book, Mid-Module Assessment Tasks and

Rubrics can also be used in a "diagnostic manner as they assess TEKS that will be assessed again on the End-of-Module Assessment Task."

- "Fluency Practice" and "Application Problems" are described as diagnostic tools intended to provide distributed practice and connect previous concepts to current lessons. As outlined in the *Program and Implementation Guide*, there are several lesson-level and module-level diagnostic assessments. Fluencies can be used to diagnose readiness in the lesson. The format of fluencies varies throughout the module. "Fluency Practice" has three goals, including "Anticipation (skills that ensure students are ready for the in-depth work of upcoming lessons)." Also, "Application Problems" can be "used to activate schema or prepare students for new learning." Lastly, the Exit Tickets are stated to have two purposes, which are "indispensable for planning purposes" of future lessons. Exit tickets also vary in format.
- The materials provide formative assessments through "Problem Sets" in each module, offering diverse tasks like group projects and various question types. For instance, in grade 5 Module 3, Lesson 4, students represent fraction problems by drawing pictures using the rectangular fraction model. These sets feature multiple-choice and short-constructed response questions, promoting analysis, evaluation, and creative thinking. Additionally, "Student Debriefs" serve as formative assessments through class discussions. According to the *Math Program and Implementation Guide*, Mid-Module Assessments are considered summative OR formative. This information is also stated in the book.

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

- The materials outline the roles and intended purposes of diagnostic tools, formative assessments, and summative assessments. For example, the Approach to Assessments section in the *Math Program and Implementation Guide* clarifies that Mid-Module and End-of-Module Assessment Tasks are primarily summative assessments. These tasks provide comprehensive feedback on student understanding and instructional effectiveness, guiding adjustments in teaching. The *Math Program and Implementation Guide* and the Grade 5 Assessment Guide define the various types of assessments, such as mid-module and end-of-module assessments. Both thoroughly explain the purpose and rationale behind each assessment as well as when to administer them.
- Problem Sets and Exit Tickets are described as formative assessments. Exit Tickets are brief assessments designed to immediately gauge student comprehension and identify areas needing review or additional support.

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

- The materials include an "Approach to Assessments" in the *K–5 Math Instructional Materials* section in the grade 5 *Assessments Teacher Edition*, which provides teacher guidance on best practices to ensure the consistent administration of both the Mid-Module and End-of-Module

(instructional) "Assessment Tasks" included in each Module of the materials. Additionally, these tasks present new challenges to students and are not preceded by similar problems.

- The *Math Program and Implementation Guide*, included in the program materials, offers teacher guidance on best practices for administering formative and summative assessments to ensure accurate administration of both. For instance, the "End-of-Module Assessment Task" section specifies that "Similar to the Mid-Module Assessment tasks, the End-of-Module tasks should be completed independently by students within one class period. These tasks should also be new to the students and not preceded by analogous problems."
- The materials also include "Suggestions for Implementation" in the *Assessment Guide Teacher Edition*, which provides suggestions on the time allotted for the Mid-Module and End-of-Module Assessments. In the "Module Overview" found in each *Module Teacher Edition*, there is a chart that provides information on when to administer the Mid-Module and End-of-Module assessments and how many days are allotted for each assessment. This guidance helps teachers ensure consistent administration of instructional assessments. Additionally, the "Suggested Methods of Instructional Delivery" section includes teacher guidance on how to administer "Sprints," which can serve as formative assessments.

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

- The materials include summative assessments aligned with the TEKS of the course and the objectives of the module. In the Mid-Module Assessment Task and End-of-Module Assessment Task section found in the *Assessment Guide Teacher Edition*, the materials feature a chart detailing the standards addressed for each Mid-Module and End-of-Module assessment. Additionally, there is a rubric titled "Progression Towards Proficiency" that specifies which TEKS standards each question on the Mid-Module and End-of-Module Assessment Tasks addresses, identifying correct answers and criteria for earning partial points. Exit tickets mirror the questions in the Problem Sets and align with the objectives and TEKS associated with each lesson.
- Formative assessments in the form of exit tickets are included in each lesson of the course materials and are aligned with both the stated lesson objective (noted in the "Lesson Overview"), the TEKS (found in the "Overview of Module Topics, and Lesson Objectives" within each module of the materials). The materials also contain formative assessments aligned with the TEKS of the course and the objectives of the lesson.
- There are several opportunities for diagnostic assessments that are aligned with the TEKS and objective of the course, unit, or lesson. The first is the Mid-Module Assessment Task and Rubric, as found in the *Assessment* book, which outlines that they can be used in a "diagnostic manner as they assess TEKS that will be assessed again on the End-of-Module Assessment Task." The associated TEKS for that Mid-Module Assessment can be found within the rubrics, as outlined, for example, on the Module 1 Mid-Module Assessment. Another TEKS-aligned diagnostic assessment can be found within the "Fluency and Application Problems," as outlined in the *Math Program and Implementation Guide*, which can be used for anticipatory purposes.

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

- The materials contain a Mid-Module Assessment Task that outlines the standards being assessed. This assessment comprises questions designed to prompt students to exhibit understanding across multiple levels of complexity using explanations, drawings, and representations. For example, students are presented with a challenging task involving an open response and text entry and are instructed to "Show your work by using a drawing, numbers, or words." Summative assessments include standards-aligned items in multiple-choice, short-answer, fill-in-the-blank, and multi-select formats. They include tasks at Depth of Knowledge levels 1, 2, and 3. Detailed information on different question types and answer keys can be found in the *K–5 Math Grade 5 Assessment Metadata* resource.
- Each lesson in the course materials includes a Problem Set with standards-aligned questions at different levels of complexity. Module 4, Lesson 6 includes a Problem Set, which is a daily formative assessment. Questions throughout this assessment involve problems with various levels of complexity, including calculating in question one and comparing in question two.

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 materials include instructional assessments and scoring information that 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.

- In the *Grade 5 Assessments Teacher Edition*, the section on "Evaluating Student Outcomes" offers teachers guidance on using "Progression Toward Proficiency" rubrics. These rubrics, tailored for each Mid-Module and End-of-Module assessment task, provide guidance for teachers to pinpoint students' strengths, misconceptions, and areas needing instructional support. This section includes scoring details and guidance for teachers who use the "Assessment Tasks" as a formative or summative evaluation of student performance.
- The "Collaboratively Troubleshooting Student Misconceptions" section of *Grade 5: Modules 1-7 Teacher Edition* includes a table that assists the teacher in addressing student misconceptions and responding to formative or summative assessment data. The table identifies possible misconceptions and provides strategies to help students better understand the learning objectives.

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

- The course materials include an "Additional Days School Year (ADSY) Module," which offers supplemental lessons, tasks, and activities. According to the *K-5 Component Navigation Guide*, these resources can be used for "responding to data after an assessment." The ADSY Module also provides teachers with guidance on using these lessons to address trends in student performance on assessments.
- The *Grade 5 Assessments Teacher Edition*, included in the course materials, includes a "Suggestions for Implementation" section. This section suggests using tasks and activities to respond to student performance on assessments. One such suggestion states, "For example,

if data shows students need support reaching proficiency, teachers can utilize TEKS associated with each item in the Progression to Proficiency rubric. They can also refer to the scope and sequence, standards by lesson, and development of fluency information in the *Course Guide* to find appropriate lessons or fluency activities for additional practice."

- Each module of the *Teacher Edition* includes a section titled Collaboratively Troubleshooting Student Misconceptions, featuring a chart that identifies potential student misconceptions. It lists various tasks and activities designed to address these misconceptions. For example, in grade 5 "Module 6," the student misconception is that "students confuse the movements from the x- and y- coordinates on the coordinate plane." One recommended task is to "Incorporate movement and the x- and y-axis language into activities where students name the coordinates for a point or plot a point given a coordinate pair."
- In the *Math Program and Implementation Guide*, the "Responding to Trends in Student Performance" section provides guidance to teachers on identifying trends and using structured materials effectively. It states, "Teachers can identify trends and use the coherent structure of these instructional materials to respond to student performance. Topics are clearly labeled with focus standards to help teachers quickly locate materials, problems, and other resources for supporting students in small groups or individually." This guidance assists teachers in utilizing tasks and activities to address trends in student performance effectively.

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

- The "Assessment Reflection" section of the *Course Guide* includes a chart titled the "Assessment Reflection Tool." This tool helps students monitor their progress and growth. It includes guiding questions that students answer before, during, and after assessments. These questions prompt students to reflect on their experiences, understand confusing aspects, recognize their existing knowledge, and identify ways to better prepare for future assessments. According to the materials, "This assessment reflection tool, available in the *Course Guide* for each grade level, helps teachers facilitate discussions both before and after an assessment."
- The "Fluency Practice" section of the *Math Program and Implementation Guide* mentions that "Sprints can be used to promote self-monitoring and self-improvement."

Supports for All Learners

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

The materials include teacher guidance for differentiated instruction and activities, 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.

- The course materials feature margin notes strategically placed to provide teachers with guidance on differentiated instruction or activities tailored for students who need more practice building proficiency on grade-level concepts. Within the *Math Program and Implementation Guide*, the "Differentiation and Scaffolds" section includes a chart illustrating examples of scaffolds across three categories: Multiple Means of Representation, Multiple Means of Action and Expression, and Multiple Means of Engagement.
- The *Additional Days School Year Manual* offers opportunities for students to gain additional practice in reinforcing content. The "Module Overview" within this manual provides suggestions on implementing lessons, each of which is aligned with at least one module.
- Within the *Grade 5 Modules 1–7 Teacher Edition*, the "Collaboratively Troubleshooting Student Misconceptions" section presents teachers with a table of differentiated instruction strategies and guiding questions. These resources are designed to assist students who are struggling to grasp specific concepts, aiming to support teachers in implementing differentiated instruction to enhance students' understanding of the TEKS.

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

- Lesson plans within the course materials include pre-teaching or embedded supports for unfamiliar vocabulary and references provided in margin notes. These notes feature scaffolds that clarify vocabulary through charts and visuals, and they offer sentence frames to support both oral and written language. For instance, in Module 1, Lesson 4, the Notes on Multiple Means of Representation suggest creating a chart to assist students, including emergent bilingual students, with understanding the term *unknown factor*. They recommend writing a division sentence such as $8 \div 4 = \underline{\quad}$ and labeling the total, unknown factor, and known factor.
- Each module overview in the course materials includes a "Terminology" section that provides definitions and visual supports for the vocabulary featured in the module. Teacher guidance on utilizing the Terminology section for pre-teaching or embedded support is detailed in the *Math Program and Implementation Guide*.
- There are several opportunities for pre-teaching vocabulary. In Module 2, Lesson 19, in the Multiple Means of Representation, there is an opportunity to clarify unfamiliar words used in the lesson. The guidance states, "Support students, including some emergent bilingual learners, by clarifying the context of each word problem and discussing unfamiliar or multiple meaning words (ex., cilantro, dill, concentrate, batch). The materials provide embedded supports for unfamiliar vocabulary and references in text. For example, Module 2, Lesson 28, provides teacher guidance in the margin notes to talk through steps and verbalize decision-making. The margin notes explain, "This strategy is beneficial for students who do not have enough background knowledge or vocabulary to answer questions."

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

- Lesson plans in the *Grade 5 Modules 1–7 Teacher Edition* include teacher guidance for differentiated instruction, targeting students who demonstrate proficiency in grade-level concepts. This instruction involves incorporating complex questions or tasks during the "Concept Development" and "Problem Set" sections of each lesson. According to the *Math Program and Implementation Guide*, "Problem Sets are intentionally crafted from simple to complex with various access points based on a student's current level of proficiency." Additionally, the materials offer opportunities for students to engage with questions of varying depth during the "Student Debrief," such as justifying their answers using academic vocabulary.
- Margin notes in lesson plan materials suggest differentiated instruction through extension activities designed for proficient students. For example, in Module 5, Lesson 14, the Notes on Multiple Means of Engagement suggest challenging proficient students to construct and classify triangles based on given criteria, exploring how many different types of triangles they can create.
- The Differentiation and Scaffolds section of the *Math Program and Implementation Guide* states teachers should consult margin notes for extension suggestions. For instance, in Module 5, Lesson 6, the Notes on Multiple Means of Engagement suggest challenging

students with strong spatial skills to draw and calculate the volume of figures made of three prisms, then exchange figures with a partner and write about the information needed to calculate the volume. However, not all lessons incorporate such extension activities.

- The materials have differentiated enrichment instruction for students who have demonstrated proficiency, as noted in Module 1, Lesson 11. In the "Application Problem," there is an extension for students, which is an opportunity for enrichment. The materials state, "How much will Patty spend on juice in 10 months? 12 months?" The materials provide another opportunity for enrichment in Lesson 12, when the Multiple Means of Engagement margin box states, "Students can also be challenged to use a compensation strategy to make another connection to whole-number division."

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 learning 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).

- Each lesson within the course materials features a concept development component structured with detailed teacher prompts presented in a vignette format, marked with "T:". These prompts provide explicit guidance for modeling, explaining, and communicating the concepts addressed in the lesson. Additionally, exemplary student responses to each question are provided and marked with "S:".
- The "Concept Development" section in the *Math Program and Implementation Guide* offers guidance on effectively introducing new concepts, particularly when introducing new terminology. It recommends having students explore the meanings of new key terms through interactive discussions and turn-and-talk strategies. The Concept Development section organizes all teacher guidance in a linear vignette format, facilitating the clear integration of each element within the lesson cycle.
- Margin notes within each lesson provide additional guidance to support teachers in modeling, explaining, and communicating the concepts to be learned. These notes offer specific advice on how to effectively model, explain, or communicate particular content. For example, in Module 6, Lesson 7 gives teachers guidance on how to support students in reading information displayed in tables.
- Lessons in each module are grouped into topics, and each topic includes an overview that offers guidance to support teachers. The overview for Topic A provides explicit direction on how to model, explain, and communicate the concept directly and effectively.

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

- The course materials feature comprehensive teacher guidance for effective lesson delivery, incorporating a variety of instructional approaches. These include cooperative learning, read/draw/write activities, paired learning, discourse, and concept debriefs. For example, in Module 4, Lesson 19, the Concept Development section explains, "We used two different models (counters and arrays) to find fractions of sets. Today, we will use strip diagrams and area models to assist us."
- Lessons provide guidance on facilitating effective learning experiences through various instructional methods, such as daily lesson vignettes, question strategies, group work, and peer teaching. They emphasize hands-on learning with manipulatives, real-life objects, and graphic organizers to actively engage students.
- The materials offer teacher guidance on effective lesson facilitation, encouraging reflective practice, peer teaching and learning, and collaborative learning approaches. These instructional strategies are integrated throughout the lesson, including within the "Student Debrief" section, which provides guided instructions to facilitate reflection and discussion of lesson concepts.

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 lesson in the course materials is designed to foster student proficiency of concepts through a variety of practice modalities, including modeled, guided, collaborative, and independent structures. Lessons are structured sequentially to include "Fluency Practice," "Application Problems," Concept Development, and a Student Debrief. The materials incorporate independent practice opportunities at the end of each lesson, such as exit tickets, problem sets, and homework assignments. The "Lesson Structure" section of the *Math Program and Implementation Guide* offers guidance on effectively implementing each component and explains their respective purposes.
- The lesson materials provide comprehensive support for diverse practice approaches, utilizing whole group, small group, paired, and individual learning structures within each lesson cycle. The *Math Program and Implementation Guide* offers teacher suggestions for organizing small groups and paired learning teams to enhance lesson effectiveness. This section outlines the objectives of each lesson component, offering scaffolding, accommodations, and differentiation strategies to support the needs of all learners.

Supports for All Learners

3.3	Supports for Emergent Bilingual Students	10/11
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.	1/2
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 at least one level 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 do not include teacher guidance for linguistic accommodations at more than one level 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.

- The *Grade 5 Teacher Edition* offers linguistic accommodations through margin notes in lesson plan materials. These accommodations provide teacher guidance on supporting understanding and fostering academic language acquisition for emergent bilingual students. For instance, supports include utilizing anchor charts, sentence stems, graphic organizers, partner activities, strategic grouping, and visuals.
- The "Emergent Bilingual" section of the *Math Program and Implementation Guide* offers teachers guidance on employing linguistic accommodations for emergent bilingual students to enhance vocabulary, comprehension, and knowledge acquisition. It also advocates for establishing language routines to reinforce understanding of new key terms.

- The materials include guidance to support students who have different levels of English language proficiency. For example, in the *Math Program and Implementation Guide*, two sections include guidance on supporting students who have different levels of English language proficiency: the "Structuring Student Groupings" section and the "Linguistic Accommodations for EB Students to Build Comprehension and Knowledge" section. The guidance is not specific to using linguistic accommodations to address proficiency levels and 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.

- The *Math Program and Implementation Guide* includes a section titled "Support for Emergent Bilingual Students," which offers guidance on the four-part lesson design, linguistic accommodations for building vocabulary, research-based language routines for introducing new key terms, and strategies to improve comprehension. For instance, teachers receive guidance on implementing a "Collect and Display Language Routine" within the lesson cycle to aid in academic language acquisition as outlined in the ELPS.
- Lesson plans incorporate margin notes that outline accommodations for supporting emergent bilingual students aligned with ELPS through "Multiple Means of Engagement, Representation, and Action." These scaffolds and supports propose modifications to activities to cater to the needs of emergent bilingual students. They include guidance on acquiring vocabulary, fostering language development related to specific topics, and assisting teachers in effectively utilizing sentence stems to aid students. Accommodations encompass strategies like turn-and-talk discussions, clarifying vocabulary using charts and visuals, and supplying templates, as well as graphic organizers.

Materials include embedded guidance for teachers to support emergent bilingual students in developing academic vocabulary, increasing comprehension, building background knowledge, and making cross-linguistic connections through oral and written discourse.

- The *Grade 5 Teacher Edition* supports oral discourse through various strategies. Lessons emphasize building academic vocabulary with visual aids and using gestures and background knowledge to clarify unfamiliar words. Additionally, the module includes strategies like recording student responses and providing extra practice time to enhance oral communication. The "Fluency Practice" component aims to build or activate background knowledge.
- Lesson plan materials promote cross-linguistic connections by allowing students to discuss mathematical reasoning in their preferred language. In the "Terminology" section of the "Module Overview," Spanish cognates are included when a term has a similar meaning and spelling in English, supporting emergent bilingual students who speak Spanish. To improve written discourse, lesson plans guide teachers in supporting students who need more practice by offering a word bank for constructing written responses. They suggest using sentence frames or prompts to assist students during written activities and facilitating

discussions. Furthermore, teachers are encouraged to pair emergent bilingual students with peers to support reading tasks aloud and help with written responses.

- Individual lesson components align with ELPS standards, aiming to enhance comprehension in the "Concept Development" and "Student Debrief" sections. Teacher vignettes encourage strategic questioning that prompts students to use academic vocabulary in their explanations and relate concepts to familiar experiences.

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

- The material is not designed for dual language immersion (DLI) programs.
- Materials include resources addressing metalinguistic transfer from English to the partner language. For example, the *Math Program and Implementation Guide* includes a section to support emergent bilingual students. This section identifies the student debrief portion of the lesson as a support for metacognitive and metalinguistic thinking. Materials state the effect of lowering students' affective filters through routine lesson delivery as metalinguistic thinking support.

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 include 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 include questions and tasks that 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.

- Grade 5 materials include practice opportunities in the lessons that require students to demonstrate depth of understanding aligned to the TEKS. Information within the *Math Program and Implementation Guide* describes instruction components. It states, "These components are taught through the deliberate progression of material from concrete to representational to abstract. Lesson components and stages of instruction within these components are designed to help students reach higher and higher levels of understanding." Lesson-level practice includes procedural and application practice aligned to the TEKS. For example, Module 2, Lesson 20, "Problem Set," includes opportunities for students to show their division thinking with place value disks and place value charts alongside the algorithm. The last three problems of the Problem Set include division in the context of real-world problems.
- The materials include mid-module and end-of-module assessments for students to demonstrate depth of understanding aligned to the TEKS specific to each module's content. The *Grade 5 Assessments Teacher Edition* overview provides information about the assessment question types. Summative assessment questions come in formats that include constructed response, multiple choice, and multi-select, in which students demonstrate their comprehensive understanding and proficiency of the module concepts. The "Progression Toward Proficiency" rubric for mid-module and end-of-module assessments describes how the students show their understanding with increasing proficiency. The rubric defines the depth of understanding aligned to the TEKS. For example, Module 1, "Mid-Module Assessment Task," provides proficiency guidance for question 2 aligned to TEKS 5.2A. To receive full points for this question, the rubric requires students to correctly model the given decimal number on a place value chart and include words, numbers, and a model of the explanation of the value of each digit.

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

- In the "Concept Development" section of each lesson, students engage with tasks that increase in rigor and complexity progressively. For instance, in Lesson 2, students tackle tasks that increase in rigor across three levels of depth of knowledge: write in standard form, solve with multiplication, and discuss solutions with a partner to encourage critical thinking and peer discussion, leading to grade-level proficiency in TEKS.
- The lesson structure includes tasks that progressively increase in rigor and complexity, leading to grade-level proficiency. For example, in Module 2, Lesson 1, the lesson begins with fluency practice to reinforce previous knowledge, proceeds to solving one- and two-step word problems using the "Read–Draw–Write" process, and concludes with a student debrief that promotes critical thinking through peer discussion of mathematical concepts and independent practice on an exit ticket.
- Lesson questions progress from simple to complex understanding, guiding students toward achieving grade-level proficiency in the standards. In Module 1, Lesson 13, students start with questions covering the division of decimals with a remainder through the use of a place value disk, a place value chart, and the standard algorithm. The final questions in the problem set integrate this skill into word problems encompassing the division of decimals.

Depth and Coherence of Key Concepts

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

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 patterns, big ideas, and relationships between mathematical concepts. Materials demonstrate coherence across units by connecting the content and language learned in previous courses/grade levels and what will be learned in future courses/grade levels to the content to be learned in the current course/grade level. Materials demonstrate coherence at the lesson level by connecting students' prior knowledge of concepts and procedures from the current and prior grade level(s) to new mathematical knowledge and skills.

Evidence includes, but is not limited to:

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

- The *Grade 5 Course Guide* includes a "Progression of Mathematical Concepts chart, color-coded by mathematical strand, which outlines the vertical alignment and sequence of grade-level modules from Kindergarten through grade 5. For example, in grade 2, students explore fractions as equal parts of shapes, while grade 3 focuses on understanding fractions as numbers on a number line. Moving into grade 4, students delve into fraction equivalence, ordering, and comparison, and by grade 5, they progress to operations such as addition, subtraction, multiplication, and division of fractions. The "Rationale for Module Sequence" in grade 3 within the *Course Guide* provides details about this progression of modules across the course.
- The materials demonstrate coherence across the grade 5 course through a logically connected scope and sequence. The sequence of grade 5 modules includes an alignment to the TEKS. The modules start with place value and decimals in Module 1, move to multi-digit operations and fraction arithmetic in Modules 2, 3, and 4, and problem-solving with volume, area, and the coordinate plane in Modules 5 and 6. Each module builds on the previous one.

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

- The materials include an overview section for each topic within every module describing coherence across modules through connecting patterns, key concepts, and mathematical relationships taught throughout. The overviews include teacher guidance for each focus standard while emphasizing the overall coherence. The overviews provide guidance on how big ideas connect within and across modules. For example, Module 2, "Module Overview," states, "In Module 1, students explored the relationships of adjacent units on the place value chart to generalize whole number algorithms to decimal operations. In Module 2, students apply the patterns of the base-ten system to mental strategies and the multiplication and division algorithms."
- The materials include coherence across modules by explicitly linking the current concept to previous and upcoming concepts. For example, in Module 1, Lesson 7, rounding decimals, the "Fluency Practice" explains how the activity reviews skills from a previous lesson and continues the approximation sign from grade 4.
- The materials connect patterns between concepts. For example, the *Grade 5 Course Guide* states, "Students' work with fractions is applied to area and volume in Module 5. Now, questions can be asked about the area of a rectangle with side lengths that are a whole number and a fraction or a whole number and a mixed number." Students apply the fractional patterns taught in Modules 3 and 4 to their work in Module 5.
- The materials apply the "Read-Draw-Write" approach to solving problems across modules, lessons, and grade levels. This consistent approach, along with the use of familiar models to represent real-world problems, demonstrates coherence by connecting mathematical patterns throughout the instructional materials.

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

- The materials demonstrate coherence across modules by connecting content learned previously to the content to be learned in the current grade level. Lessons are designed to incorporate application problems that review concepts and procedures learned earlier in the current grade level, preparing students for learning new knowledge and skills. Fluency practice revisited concepts and procedures from previous grade levels in preparation for current learning. The "Concept Development" component and margin notes in lesson materials offer clear guidance for teachers on how to help students connect their prior learning with new concepts in the current course lesson.
- Materials demonstrate coherence across modules by connecting the content to what will be learned in future courses. For example, Module 3, Topic B Overview, includes a description of how the topic connects to learning in grade 6. The materials state, "The number line makes it clear that numbers on the left are smaller than numbers on the right, which leads to an understanding of integers in grade 6." Module 6, Topic B Overview, also includes a description of how the topic connects to learning in grade 6. The Overview states, "Students begin by

investigating patterns relating the x- and y-coordinates of the points on the line and reasoning about the patterns in the ordered pairs, which lays important groundwork for Grade 6 work with proportional reasoning."

- The "Topic Overviews" provide guidance on how concepts and procedures in lessons connect and build on each other. For example, in Module 5, Topic B, students use their prior concrete understanding of volume explored in Topic A to find the volume of rectangular prisms and cubes using formulas.
- The lesson materials in grade 5 demonstrate coherence by applying familiar procedures to introduce new mathematical concepts. For example, students across different grade levels have opportunities to create number bonds and a graphical representation of numerical relationships, which serves as a consistent method to connect prior math knowledge with new skills. For instance, in Module 4, Lesson 1, coherence is evident as it builds on students' prior knowledge of interpreting products of whole numbers from grade 4 before expressing non-unit fractions as a whole number multiplied by a unit fraction using strip diagrams.
- The materials demonstrate the coherence of language learned previously in the course and in other grade levels. Each module includes a "Terminology" section in the Module Overview. This section has two parts: familiar terms and symbols and new or recently introduced terms. The familiar terms and symbols link to language from previous courses that students use in the current course. This section provides definitions and visual models to reinforce understanding of these terms in context.

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.

- Materials demonstrate coherence at the lesson level by incorporating application problems that review concepts and procedures from earlier learning in the current grade level, preparing students for the learning of new knowledge and skills. Fluency practice reviews concepts and procedures from previous grade levels, reinforcing foundational skills in preparation for current learning. The Concept Development component and margin notes in lesson materials offer clear guidance for teachers on how to help students connect their prior learning with new concepts in the current lesson.
- The Topic Overviews include guidance on how concepts and procedures in lessons connect and build on each other. For example, in Module 5, Topic B, students use their prior concrete understanding of volume explored in Topic A to find the volume of rectangular prisms and cubes using formulas.
- The lesson materials demonstrate coherence at the lesson level by using familiar procedures to introduce new mathematical concepts. For example, students across different grade levels create number bonds as a consistent method to connect prior math knowledge with new skills. In Module 4, Lesson 1, coherence is evident as it builds on students' prior knowledge of interpreting products of whole numbers from grade 4 before expressing non-unit fractions as a whole number multiplied by a unit fraction using strip diagrams.

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

Evidence includes, but is not limited to:

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

- The course materials include key lesson components that facilitate learning through spaced retrieval of previously acquired knowledge and skills. At the lesson level, "Fluency Practice" involves mental math exercises that revisit previous skills from current and prior modules. For instance, before delving into a lesson on solving measurement word problems using estimation, students engage in an estimation sprint and practice using subtraction algorithms with measurements.
- "Application Problems" provide spaced retrieval opportunities to solve word problems using various techniques such as strip diagrams, number bonds, and arrays. For example, Module 2, Lesson 1, includes an application problem where students solve for an unknown in the equation $8 \times \underline{\quad} = 96$. The materials provide exemplar responses using an area model and number bond. The note below the problem states, "This Application Problem applies the skill of dividing a two-digit dividend using an area model and serves as a lead-in to this lesson's Concept Development by using area models to illustrate the concept of factor pairs."
- Sometimes, the "Student Debrief" section integrates spaced retrieval practice. Students revisit previously learned skills and concepts through targeted questions and reflection points, making connections between previously learned skills across lessons. For example, in Module 1, Lesson 7, the Student Debrief section includes the question, "Compare our approach to rounding in today's lesson and in lesson 6".
- Course materials offer systematic retrieval opportunities through assessments found in the *Assessments* book. Each module includes Mid and End-of-Module assessments aligned with the TEKS, assessing students' proficiency in concepts in each module. Modules 1–7 incorporate spiral review activities that span across lessons and modules. These tasks are designed to activate students' prior knowledge. Lessons include a student debrief section that integrates retrieval practice. In the student debrief section, students revisit previously learned skills and concepts through targeted questions and reflection points, reinforcing their understanding over time.

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

- The course materials integrate components that provide interleaved practice of previously learned skills and concepts. For example, in Module 3, Lesson 5, teacher guidance prompts students to analyze two approaches for solving problem 4 from the "Problem Set." Students study a strip diagram and its application to problem-solving with fractions. This approach allows students to revisit and apply the strip diagram in a new context.
- The Fluency Practice supports skills in the upcoming lesson. These activities align with current lesson concepts, providing ongoing practice. For example, Module 1, Lesson 6, includes a fluency practice to review renaming decimals using various modules. The notes indicate this fluency anticipates learning rounding decimals in Concept Development.
- The materials also incorporate interleaved practice through Application Problems, where students determine the most effective operations and strategies to solve problems. The application problem includes prior learning recall, critical thinking demands, and the application of skills in varied contexts.
- The materials systematically revisit and apply previously learned concepts throughout each module. For example, in Module 6, students extend their prior knowledge of number lines when learning coordinate planes. Using this approach, foundational skills are reinforced and applied in increasingly complex scenarios.

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.	12/2
5.1c	Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.	4/4

The questions and tasks require students to interpret, analyze, and evaluate a variety of models and representations for mathematical concepts and situations. Questions and tasks require students to create a variety of models to represent mathematical situations. Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.

Evidence includes, but is not limited to:

Questions and tasks require students to interpret, analyze, and evaluate a variety of models and representations for mathematical concepts and situations.

- Lesson tasks require students to engage with mathematical concepts through interpreting, analyzing, and evaluating using a range of representations. For example, in Module 3, Lesson 4, "Concept Development," students use fraction models, number bonds, and decomposed algorithms to represent and solve subtraction problems involving fractions. Questions in the "Problem Set" prompt students to use the representation of their choice to solve mathematical problems representing a variety of situations.
- The lesson structure provides opportunities for students to interact with a diverse array of models and representations, encouraging them to interpret, analyze, and evaluate different mathematical concepts. For instance, in Module 1, students engage with place value disks, place value charts, base ten blocks, and number lines to support their understanding of place value and decimals.
- The lessons include questions to prompt students to interact with various models and representations and prompt them to interpret, analyze, and evaluate different concepts. For example, the Concept Development in Module 6, Lesson 3, includes scaffolding questions to develop students' understanding of using coordinate grids to locate ordered pairs. In Module 5, Lesson 1, Concept Development, students manipulate centimeter cubes to model a 3-D shape. Students interpret new models, analyze changes to the model, and evaluate solutions to find the volume of the models. Questions in the vignette align with the students' tasks and allow students to share their mathematical understanding.
- The materials feature questions that challenge students to construct diverse models to illustrate mathematical concepts. For instance, in Lesson 2, the Problem Set prompts students with six questions involving modeling fractions by folding paper and drawing a model

to help solve. Module 5, Lesson 8, Concept Development, starts with an area model representation, prompting students to interpret the model. As the lesson progresses, students view various area models, analyze the changes, and evaluate area solutions.

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

- The course materials include tasks that prompt students to create diverse models to represent place value. For example, in Module 1, Lesson 1, Concept Development, students are tasked with modeling a number using a place value disk. Five problems provide students with an opportunity to represent different mathematical situations in the place value model.
- Each lesson component includes questions that require students to create a variety of models to represent mathematical situations. For example, in Module 3, Lesson 6, students use fraction models to subtract fractions from whole numbers. The "Application Problem" asks students to create a model to solve a word problem. The Concept Development, Problem Set, and "Exit Ticket" sections include scaffolding questions that prompt students to add fractions to and subtract from whole numbers using a number line.
- Lesson components across the modules require students to construct various models that illustrate mathematical scenarios. For instance, in grade 5, the "Suggested Tools and Representations" section of the "Module 2 Overview" lists the following representations: area models (e.g., array), number bond, place value disks, partial product, partial quotient, and strip diagram.
- Application Problems within the instructional materials require students to use models as part of strategic problem-solving techniques, such as the material's "Read-Draw-Write" strategy. The strategy prompts students to select appropriate models—whether strip diagrams, number bonds, area models, or other visual aids—to solve problems effectively.

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

- Each module provides students with opportunities to apply their conceptual understanding to new and complex problem situations. Both teacher-guided facilitation questions in the Concept Development and guided practice questions in the Problem Set components support comprehension and apply learning from previous lessons. For instance, in Module 5, Lesson 1, students compare and justify their answers with peers. The vignette includes the teacher prompt, "With a partner, build a structure with no more than 10 cubes each. Then, draw your partner's structure on dot paper. Help each other figure out if it matches what you built."
- The "Fluency Practice" and Application Problem tasks activate students' prior knowledge and allow them to apply conceptual understanding in various contexts. This foundational process is reinforced in Concept Development, which introduces new tasks while integrating previously acquired mathematical concepts.
- The "Student Debrief" tasks include guided questions that prompt students to apply conceptual understanding by comparing, explaining, and justifying their answers. Students

discuss different problem-solving strategies, explaining their reasoning and justifying their preferred method. For example, Module 5, Lesson 1, includes the question, "In Problem 3, do you agree with Joyce? Why or Why not? What do you need to think about when counting cubic centimeters in drawings? How is it different from counting them in person? Is it possible for a drawing to fool you? Might some cubes be hidden, or might there be gaps that you cannot see?"

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.

- The "Fluency Practice" lesson component includes "Sprints" throughout each module of the course materials. Sprints are timed fluency exercises to help students identify patterns and solve increasingly complex problems. For instance, in Module 1, Lesson 1, students multiply by 10, moving from simple multiplication of two-digit numbers in the first column to multiplication of three-digit numbers in the second column. According to the *Math Program and Implementation Guide*, Sprints "are carefully selected and sequenced to help students recognize patterns and structures to solve subsequent, more complex problems." These exercises assist students in developing the automaticity needed to solve grade-level tasks. Sprint tasks encompass a range of skills such as recalling math facts, computational patterns with whole numbers and grade-appropriate rational numbers, rounding, estimation, and simplifying fractions.
- Lessons within the course materials encompass both Fluency Practice and "Application Problem" components. These components are designed to aid students in developing the fluency necessary for grade-level tasks. Fluency Practice tasks "offer spaced practice with previously learned material and prepare students for new learning by activating prior knowledge," with a primary emphasis on procedural fluency. Application Problem tasks, on the other hand, "apply conceptual understanding to make sense of and persevere through new

problems," supporting fluency through the direction to use flexible thinking strategies in problem-solving contexts.

- The "Concept Development" components support student fluency by providing teachers with guidance to facilitate exploration and discussion of various problem-solving approaches with newly introduced mathematical concepts. For example, the objective of Module 2, Lesson 4, is to "Estimate multi-digit products by rounding factors to a basic fact and using place value patterns." Building fluency in Lesson 4 supports further lessons in the module that engage students with the standard algorithm for multiplication.

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 the lesson components, prompts direct students to apply efficient, flexible, and accurate mathematical procedures. For example, in Module 2, Lesson 33, students are tasked with solving multi-step division word problems using pictorial representations, estimation, and/or the standard algorithm. As the lesson progresses, students have the opportunity to select and apply the strategy of their choice to solve the division problems.
- The material's lesson structure supports students' use of efficient, flexible, and accurate mathematical procedures when learning new concepts. For example, in Module 5, Lesson 29, the objective states, "Use basic facts to approximate decimal quotients with two-digit divisors, reasoning about the placement of the decimal point." The lesson provides students the opportunity to apply knowledge of basic facts and proficiency in product estimations from prior learning in a new context. The teacher guidance provides a question asking students why estimating is useful. In the next problem, the teacher asks, "Thinking about this story problem, will the number of pounds in each bag be more than 1 pound or less than 1 pound? How do you know?" Throughout the lesson, the teacher guides students to use estimation as a strategy to guide the application of accurate mathematical procedures.

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

- Lesson components within the materials provide opportunities for students to apply flexible, accurate, and efficient mathematical procedures throughout their learning. For example, Application Problems prompt students to apply previously learned models and strategies to solve real-world scenarios. The problem-solving model, "Read-Draw-Write," supports students in finding a suitable representation for the problem type. Additionally, "Student Debrief" sessions encourage students to explore alternative solution methods and engage in peer conversations, promoting reflection and refinement of their problem-solving techniques.
- The materials support the application of accurate mathematical procedures through "Problem Sets." Problem Sets direct students to employ a strategy of their choosing to solve problems and apply their learning of mathematical concepts. For example, Module 2, Lesson 28, Problem Set directions state, "Use place value reasoning and the first quotient to compute the second quotient. Explain your thinking."

- The Concept Development sequence of problems supports students' integration of new learning goals into their existing knowledge. Teachers' guidance includes modeling and guided practice to support students' comprehension of mathematical concepts. For example, the first two problems of the Concept Development for Module 2, Lesson 28, are $54 \div 10$ and $5.4 \div 10$. The vignette guides teachers to model problems with place value disks and area models throughout the lesson.

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

- Concept Development, a key component in every lesson of the course modules, provides opportunities for students to evaluate procedures, processes, and solutions related to new math concepts for efficiency, flexibility, and accuracy. For example, in Module 2, Lesson 33, students solve division word problems using a variety of strategies. The Concept Development provides teacher guidance for prompting students to "find someone whose drawing looks different than yours for Problem 3 or 4. Compare your approaches."
- The Student Debrief, a key component in every lesson of the course modules, guides students in evaluating the efficiency, flexibility, and accuracy of procedures, processes, and solutions for new math concepts. For example, in Module 2, Lesson 33, students solve division word problems using a variety of strategies. Suggested teacher questions in the Student Debrief include, "What did the unknown represent for each? How did that change the model you drew? Which is simpler to draw?"
- Student Debrief questions support student reflection on choosing specific problem-solving methods. During the Student Debrief, students also evaluate their approaches within the lesson sometimes with peer comparison. Questions prompt students to justify and explain their strategies. For example, Module 3, Lesson 10, Student Debrief, includes a teacher prompt stating, "Today, we saw different methods for subtracting. I drew a number bond in some solutions to emphasize how I was thinking about the numbers. Like the number line, it shows a way of thinking. In my work, the number bond shows how I break numbers into parts to make the mathematics simpler. Please share with your partner when you used a number bond on your Problem Set."

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.

- Materials explicitly state how the conceptual and procedural emphasis of the TEKS appear in each module within the "Module Overview." For example, the Module 4 Overview states how the conceptual emphasis of the TEKS is addressed. The module supports students' conceptual understanding of multiplying fractions with repeated addition sentences. Multiplication of whole numbers by a fraction understanding includes conceptual practice with strip diagrams. The module also includes lessons for students to use strip diagrams for dividing fractions. For example, this supports students in reasoning about how many fourths are in the number five. The Module Overview describes the procedural emphasis of the TEKS, stating, "Then they differentiate between gross income and net income while defining income tax and payroll tax. This gives students an opportunity to use what they know about fractions of a set to do simple tax calculations (5.10A)."
- "Topic Overviews" include an explicit description of how the conceptual and procedural emphasis of the TEKS is addressed. Module 4, Topic A Overview describes the conceptual emphasis of the TEKS, stating, "In Lessons 2–4, students use models and the associative property, as exemplified below, to multiply a whole number times a non-unit fraction." The Topic Overview describes the procedural emphasis of the TEKS with the Lesson 5 student task, where students use the distributive property to multiply a whole number by a mixed number.

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

- Materials include tasks and questions that use concrete models and manipulatives. For example, in Module 3, Lesson 3, "Concept Development," Problem 2, students are tasked with drawing a fraction model to represent a subtraction problem. Questions are then asked to the students about the drawings, like what the new smaller unit is, along with equivalence questions.
- Materials include tasks and questions that use pictorial representations. Lesson materials incorporate tasks and questions using abstract representations. For instance, in Module 3, Lesson 3, Concept Development, Problem 1, students represent a fraction using fraction strips. The task includes scaffolding questions about the model.
- Modules and lessons follow a structured approach fostering conceptual understanding by linking concrete models and pictorial representations to abstract concepts such as algorithms and equations. Questions prompt students to explain relationships among models, pictorial representations, and abstract concepts, promoting procedural fluency. Lessons include hands-on activities with manipulatives that support representations of mathematical concepts. For example, in Module 5, students use area models, centimeter cubes, grid paper, protractors, rules, a right-angle template, and strip diagrams to solve volume and area problems.

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

- The course modules include instructional sequencing of concepts and lessons using the "concrete-representational-abstract approach." The materials include explicit teacher guidance and exemplars for supporting students in connecting, creating, defining, and explaining both concrete and representational models to abstract thinking.
- The materials include tasks and questions that use abstract representation. For example, in Module 3, Lesson 3, "Problem Set," students are tasked with solving subtraction problems in fractional form and word problems with focus questions.
- The Concept Development component of lessons includes scaffolds to support students in connecting, creating, defining, and explaining concrete and representational models to abstract concepts. For example, in Module 1, students begin by using base ten blocks to multiply decimals, then record their thinking in a place value chart, draw an area model, and write an equation.
- The "Student Debrief" component of lessons allows students to explain how concrete and representational models can help them understand abstract concepts. For example, in Module 5, Lesson 15, questions include, "Use the trapezoids that students produced in Problem 1 to articulate the formal definition of a trapezoid."
- Additional support for students beyond Tier 1 lesson materials is included in the "Collaboratively Troubleshooting Student Misconceptions" section of each module overview and in margin notes provided within individual lessons in the modules. These resources suggest ways for teachers to provide additional support for students in connecting, creating,

defining, and explaining both concrete and representational models to abstract thinking through scaffolded instruction and extension tasks.

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.

- The materials offer various opportunities for students to develop their academic mathematical language through the use of visuals. For example, in the Module 5 "Terminology" section of the "Module Overview," vocabulary terms include a definition and a visual to show an example of the word. This use of a visual with the vocabulary helps the student connect the term to its meaning. Additionally, lesson components use visuals by prompting the drawing of models to represent mathematical concepts. For example, Module 4, Lesson 2, "Application Problem," connects the strip diagram to the context of multiplying fractions. The students record how many groups of thirds are within the problem in a strip diagram and then use it to identify how many wholes and parts equal the product. Using a familiar model, such as a strip diagram, to support the learning of new content provides an opportunity for students to develop their mathematical language.
- The materials actively support students in developing their academic language through the use of manipulatives. Lessons note that students can use concrete manipulatives to demonstrate their understanding while solving problems or explaining their reasoning. For example, the Module 1 Overview lists "Suggested Tools and Representations." The list states,

"Base 10 blocks, Number lines (a variety of templates, including a large one for the back wall of the classroom), Place value charts (at least one per student for an insert in their personal board), Place value disks."

- The materials provide opportunities for students to develop their academic mathematical language using other language strategies. Throughout the course, lesson facilitation guidance supports the development of academic mathematical language through strategies such as classroom discourse, peer conversations (like turn-and-talks), and collaborative learning tasks. For example, in Module 5, Lesson 13, "Notes of Multiple Means of Representation," the guidance states, "Remembering the names that classify triangles may present a challenge for some students, including some emergent bilingual students. Present helpful mnemonic devices. The word isosceles, for example, starts with the sound eyes. We have two eyes; similarly, an isosceles triangle has at least two equal sides. Encourage students to come up with their own way to remember, and then to share with others."
- During the "Concept Development" and "Student Debrief" sections, students engage in peer interactions, utilizing academic vocabulary to explain and justify their solutions. The materials support the use of visuals and manipulatives to introduce new vocabulary naturally within lesson activities. For example, in Module 5, the Lesson 13 vignette for the Concept Development states, "T: Let's record your findings. You just classified some triangles by the length of their sides. Let's label the first of the classification columns as Side Length. There are three kinds of triangles you discovered. Equilateral triangles, such as Triangle A, have all sides that are equal in length. S: That's simple to remember because equilateral starts with the same sound as the word equal." The "Problem Set" and "Exit Ticket" use academic vocabulary in questions and tasks, supporting students' understanding of words in context.

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

- The materials introduce new or recently introduced terminology and also include a list of familiar terms and symbols. These lists, which can be found in every module overview, can be used with students in various ways, including utilizing the visual supports to establish word walls or to "encourage them to naturally use terminology as they respond in class to discussion questions or in Turn and Talks" as highlighted in the *Math Program and Implementation Guide* within the "Terminology" section.
- The *Math Program and Implementation Guide* explains how margin notes support comprehension through various presentation methods and support understanding of vocabulary and symbols. For example, the guide states, "Provide multiple means of representation by using a variety of methods to present information and support understanding of vocabulary and symbols to maximize comprehension." An example of how this vocabulary is included within a margin note is in Module 3, Lesson 22. Within the "Notes on Multiple Means of Representation," a scaffold is given to support students in developing vocabulary. There is also a "Note on Multiple Means of Action and Expression" in Lesson 16 that encourages the use of the vocabulary in student answers to help reinforce it.
- When new terminology or vocabulary is introduced within a lesson, it is also then incorporated into several areas in the lesson. For example, it is then used in sample student responses as

noted in Module 3, Lesson 22, when within the vignette, the teacher introduces the word expense(s), and then the student uses it in the exemplar responses. Vocabulary is also reviewed in several student debriefs, as seen in Module 3 and within parts of the lesson where it is encouraged to remind students to use the vocabulary in context in Module 3, Lesson 22 and 23, Concept Development.

Materials include embedded guidance for the teacher to support the application of appropriate mathematical language to include vocabulary, syntax, and discourse to include guidance to support mathematical conversations that provide opportunities for students to hear, refine, and use math language with peers and develop their math language toolkit over time as well as guide teachers to support student responses using exemplar responses to questions and tasks.

- The materials feature embedded guidance to assist teachers in facilitating the application of appropriate mathematical language within the Concept Development sections. These sections introduce new terminology to students, allowing them to explore its meaning in context, formalize its use, and participate in class discussions. The lesson vignettes provide teacher guidance to support math conversations that enable students to hear, refine, use, and develop their mathematical language toolkit. For example, in Module 5, Lesson 13, teacher guidance states, "T: We can say that an equilateral triangle is a special isosceles triangle. It has everything an isosceles triangle has, but it also has a little more, such as three sides and three angles with the same measure, not just two. T: Triangle D has a right angle. Fold the other two angles into the right angle. (Demonstrate.) It's your turn. S: Neat, the two other angles fit perfectly into the right angle. T: What does that tell you about the measure of both of the other angles in a right triangle? S: The other two angles add together to make 90° ."
- The materials provide embedded guidance for teachers to support the application of appropriate mathematical language, encompassing vocabulary, syntax, and discourse during math conversations. For instance, in the "Student Debrief," students gather to reflect on their learning and analyze new concepts, guided by teacher instructions in the opening paragraph. For example, Module 1, Lesson 5, includes teacher guidance, "Compare 7 tens and 7 tenths. How are they alike? How are they different? (Encourage students to notice that both quantities are 7, but the units have different values.) Also, encourage students to notice that they are placed symmetrically in relation to the ones place on a place value chart. Tens are 10 times greater than ones while tenths are 1 tenth as much. Repeat with other values, (e.g., 2,000, 0.002), or ask students to generate values that are symmetrically placed on the chart."
- The materials feature embedded guidance for teachers to support students' responses through exemplar responses to questions and tasks. In Module 3, Lesson 2, the Concept Development vignette states, "T: Say the addition sentence now using eighths as our common denominator. S: 4 eighths plus 6 eighths equals 10 eighths. $1\text{ half} + 3\text{ fourths} = 4\text{ eighths} + 6\text{ eighths} = 10\text{ eighths}$. T: Good. What is unusual about our answer 10 eighths? Tell your partner." Throughout this section, teacher guidance includes questions to guide students during lesson activities.

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.

- "Module Overviews" provide a list of the Texas Essential Knowledge and Skills (TEKS) Mathematical Process Standards (MPS) integrated into the modules. The Overview summary explains how TEKS MPS are integrated into instructional design without explicitly naming them within the narrative.
- The *Grade 5 Course Guide* includes a chart listing TEKS MPS by lesson per module, along with a "Fluency Close-Up" detailing standard by concept (e.g., "Number and Operations"). For instance, it specifies, "The student applies TEKS mathematical process standards to represent and compare whole numbers and understand relationships related to place value."

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

- The TEKS MPS section of the *K–5 Math Program and Implementation Guide* provides teacher guidance on how the process standards are integrated into the lesson structure. According to the *K–5 Math Program and Implementation Guide*, "They are seamlessly woven into the lesson structure to require the level of thinking and behaviors that the standards embody."
 - In the *Grade 5 Course Guide*, the integration of TEKS MPS throughout the module is described, particularly in the "Development of Fluency" section. A table outlines each TEKS MPS and specifies the lesson in which it is incorporated, ensuring continuity throughout the module.
-

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

- The TEKS MPS are incorporated throughout the module, as shown in the "Scope and Sequence" section of the *Grade 5 Course Guide*. Each module has TEKS MPS incorporated. Lastly, there is a list of TEKS MPS in every module overview to show that TEKS MPS are incorporated into every module, as highlighted in Module 1. The *K–5 Math Program and Implementation Guide* describes the integration and connection of TEKS MPS throughout the course.
- The Module and "Topic Overviews" include and reference the content TEKS within the descriptions for each module and topic. Each module includes a list of TEKS MPS and a description of how process standards are incorporated and connected throughout the module. For example, Module 1 Overview includes information about how the students engage with the process standards through a descriptive statement followed by a specific process standard in parenthesis. One of the statements shows the connection, stating, "With the use of place value strategies such as using place value charts and renaming in unit form, students explain and justify comparisons between, and the ordering of, decimals **(5.1G)**."

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

- The TEKS MPS section of the *K–5 Math Program and Implementation Guide* provides teachers with guidance on integrating the TEKS MPS into the structure of each lesson throughout the course.
- The *Grade 5 Course Guide* features a table titled "Grade 5 TEKS Mathematical Process Standards by Lesson per Module," listing TEKS MPS addressed in each lesson of the course. For instance, processing standard 5.2A is present in Module 1, Lessons 3–7, 9–10, and 13. The *Grade 5 Course Guide* includes a Fluency Close-Up that categorizes TEKS MPS by concept. For example, under Number and Operations, it specifies, "The student applies TEKS mathematical process standards to represent and compare whole numbers and understand relationships related to place value." The chart is organized by TEKS, module, and lesson.

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.

- Materials provide opportunities for students to make sense of mathematics through the "Read-Draw-Write" (RDW) process. The *Math Program and Implementation Guide* states, "Students in Grades 1–5 use the Read-Draw-Write (RDW) process to make sense of problems, choose and apply mathematics, and solve." For example, in Module 3, Lesson 3, students use the RDW during "Application Development" by reading the problem, drawing and labeling a visual model, writing an equation, and writing a word sentence for the solution of the problem. As a daily lesson component, the Application Problem provides an opportunity for students to persevere through problem-solving. The *Math Program and Implementation Guide* states, "Students apply conceptual understanding to make sense of and persevere through new problems."
- Materials provide opportunities for students to think mathematically. The *Math Program and Implementation Guide* states, "A Student Debrief ends each lesson, holding space for students to reflect on and process their learning." This component provides guided discussion questions that "develop student metacognition by helping them to make connections among parts of the lesson, concepts, strategies, and tools on their own." For example, Module 2, Lesson 19, Student Debrief, includes the question, "Which problems involved converting from larger to smaller units, and which involved converting smaller to larger units? Which conversion is more challenging for you?" Another example is in Module 2, Lesson 21, Concept Development vignette, where teacher guidance prompts students to "Work with a partner to round the divisor and the whole. Then, estimate the quotient."

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

- The materials support students in understanding that there are multiple ways to solve problems and complete tasks. This includes questions during Concept Development such as, "Explain how you solved this problem. Are there any other representations we could use to model this problem?" For example, Module 5, Lesson 1, Application Problem tasks students to use centimeter cubes to represent and solve $\frac{1}{2} \times 12$. Students are then prompted to try another way by drawing an area model.
- The materials support students in explaining and justifying that there can be multiple ways to solve problems. For example, Module 2, Lesson 19, Student Debrief, poses the question, "Look back at Problem 4(b). Is there another way to solve? (Students could convert 32 quarts to 128 cups to find that each unit was equal to $2 \frac{32}{128}$ cups.)."
- The materials support students in explaining and justifying that there can be multiple ways to complete tasks. The Module 5, Lesson 3, Concept Development vignette supports conceptual understanding of volume through composing and decomposing right rectangular prisms. The activity prompts students to slice a prism in multiple ways and to use the area of one layer and the number of layers to find the volume. "Problem Set" question 1 tasks students to take the same rectangular prism and demonstrate the same strategy, slicing three prisms in three different ways and recording the same volume in a table. Question 3 asks, "Marcos makes a prism 1 inch by 5 inches by 5 inches. He then decides to create layers equal to his first one. Fill in the chart below and explain how you know the volume of each new prism." The Student Debrief provides the prompt, "In Problem 1, how did you decide how to go about decomposing the prisms? Is there a different way or order in which you could have done it?"

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

- The course materials are designed to require students to make sense of math through doing math with teachers and peers. For example, in Module 4, Lesson 3, students work with the teacher in Problem 1 to represent and solve multiplication of a whole number by a fraction using an area model. Students then work with a partner to solve two additional multiplication problems.
- The materials require students to make sense of math through writing about mathematical concepts with peers and teachers. For example, the directions in Module 6, Lesson 2, Problem Set explain, "Students should solve these problems using the RDW approach used for Application Problems." The *Math Program and Implementation Guide* provides information on the RDW process. The process requires students to "1. Read the problem. 2. Draw and label. 3. Write a number sentence (equation). 4. Write a word sentence (statement)." The RDW process is used in both instructional and practice components in the lessons, providing opportunities for students to make sense of mathematics through writing about math with both their teachers and peers.
- Materials are designed to require students to make sense of mathematics through discussing math with peers and teachers. For example, Module 2, Lesson 5, Student Debrief, includes

prompts such as, "In Problem 1(b) some of you wrote $4 \times (14 + 26)$ and others wrote $(14 + 26) \times 4$. Are both expressions acceptable? Explain" and "Look at Problem 3(b). Talk in groups about how you know the expressions are not equal. How can you change the second expression to make it equivalent to 18×27 ?" to support students in making sense of math through discussion with peers and teachers.

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.

- Materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations. For example, in Module 2, Lesson 5 materials prompt students to compare two number expressions using symbols and explain how to compare the expressions without calculating. Module 2, Lesson 22, includes prompts for teachers to invite students to explain their problem-solving approaches. One of the prompts asks, "When solving Problem 3(b), could a mental math approach be used to solve for the exact product? Explain."
- Materials support teachers in guiding students to share and reflect on their problem-solving approaches, including arguments and justifications. For example, Module 5, Lesson 11, "Concept Development," provides an opportunity for students to reflect on Problem 1 about finding the area needed to paint a wall containing two windows. The materials direct students to choose a strategy to solve and justify their choice of a strategy. In Module 5, Lesson 15, Concept Development vignette, teacher guidance includes prompts for students to justify their sorting of shapes. For example, after the students have an opportunity to sort shapes into trapezoids and non-trapezoids, a prompt asks, "What makes Shapes K and N trapezoids?" Module 5, Lesson 18, Concept Development, Part 3, includes true and false statements about quadrilaterals for students to analyze and justify their answers using properties of the shapes.

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

- Materials include guidance and prompts to assist teachers in providing explanatory feedback based on student responses. In the Concept Development vignette, prompts for the teacher are identified by a T, and examples of student responses or actions are identified by an S. After asking students questions, a teacher's response is provided in the form of feedback for the

student's response or action. For example, Module 2, Lesson 22, vignette guidance includes, "T: (Write $8,095 \div 23$ horizontally on the board.) Which number should we round first, the whole or divisor? Why? S: We round the divisor first, so we know what our unit is. Round the divisor first. This helps us know what multiples to look for when we are rounding the whole. T: Good. What's 23 rounded to the nearest ten? S: 20."

- The *Math Program and Implementation Guide* includes prompts for teachers to provide explanatory feedback based on student responses. The "Language and Communication" section states, "Therefore, one of the most significant things a teacher can do to create a culture of learning is to have routines to celebrate and reinforce the importance of mining mistakes for good mathematical thinking and reframing them into learning moments." Following an explanation of redefining mistakes as learning moments, a description of collaborative troubleshooting describes three steps: discuss surface thinking, validate what they got right, and create a bridge to a better understanding. A table provides general prompts for responding to student responses. For grade-level exemplar prompts, the *Math Program and Implementation Guide* suggests using the *Course Guide* specific to the course of instruction.
- Materials include guidance to assist teachers in providing explanatory feedback on anticipated misconceptions. For example, the "Collaboratively Troubleshooting Student Misconceptions" section provided in the "Module Overview" provides teacher guidance to support possible misconceptions. A chart associates the misconception with TEKS, their location, and the Topic. For example, in Module 2, Topic A, students may overgeneralize that all odd numbers are prime. The "How to Bridge to a Better Understanding" table provides guidance for the teacher, including, "List several odd numbers, be sure to include both prime and composite numbers, and ask students to list the factors of each number."
- The materials include prompts to assist teachers in providing explanatory feedback based on anticipated misconceptions. For example, the *Course Guide*, Collaboratively Troubleshooting Student Misconceptions example provides a teacher-student dialogue based on a misconception for Module 1, Topic B that teachers can use and adapt for other misconceptions. In addition, the Student Debrief in Module 1, Lesson 1, shows questions (prompts) that teachers can use to lead the discussion and address misconceptions.