

IMRA Review Cycle 2024 Report



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

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

IMRA Reviewers

Flags for Suitability Noncompliance 0

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

Flags for Suitability Compliance 4

Indicator	Count of Flags
Alignment with Public Education’s Constitutional Goal, 2.1.1	4
Promoting Sexual Risk Avoidance, 6.2	0

Alleged Factual Errors 1

Public Feedback

Flags for Suitability Noncompliance 0

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

Alleged Factual Errors 0

Public Comments 3

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, 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 lessons.

- 3.3 Support for Emergent Bilingual Students: The materials do not include teacher guidance on providing linguistic accommodations for multiple levels of language proficiency as defined by the ELPS.

Summary

Bluebonnet Learning is a mathematics K–5 program aligned to the Texas Essential Knowledge and Skills (TEKS) and English Language Proficiency Standards (ELPS). The materials offer a structured approach to grade 1 math instruction, incorporating a detailed scope and sequence that outlines the concepts and knowledge to be taught across various units. Each unit is supported by pacing guides that accommodate different instructional calendars, ensuring effective implementation regardless of the number of instructional days available. The materials include comprehensive unit overviews that provide essential background knowledge, academic vocabulary, and misconceptions necessary for teaching concepts effectively.

Campus and district instructional leaders should consider the following:

- *Bluebonnet Learning* includes instructional materials with assessment tasks that progress toward standard proficiency. Rubrics and exemplar student responses support teachers in scoring and responding to student performance. The lessons include a variety of instructional strategies including strategies to support emergent bilingual students. Separate small group lessons for intervention or extension are not included in the materials.
- *Bluebonnet Learning* includes materials that allow students to work through the vertically aligned problem-solving model and to think critically about mathematics. The materials build in complexity using the concrete, representational, abstract approach to learning mathematics, going deep on the most important topics at the grade level. Over time, the materials tell a coherent story of mathematics 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 Texas Essential Knowledge and Skills (TEKS), English Language Proficiency Standards (ELPS), concepts, and knowledge taught in the course. Materials include suggested pacing (pacing guide/calendar) to support effective implementation for various instructional calendars (e.g., varying numbers of instructional days – 165, 180, 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 *Course Guide* includes a "Scope and Sequence" in table form that includes a column for Module, Topics and Instructional Days, Knowledge and Skills, and Standards. Listed under the "Topics and Instructional Days" for each module is a list of the topics covered within the module, where within the topics, the "Mid-Module Assessment Task" should be given and when the "End-of-Module Assessment Task" should be given. Also listed in this column are the number of days for assessments, lesson days, assessment days, and the total number of instructional days. Listed in the "Knowledge and Skills" column are the focus knowledge and skills for the module, including what students will do. The standards column lists the TEKS and ELPS. The focus standards [TEKS] are in boldface.
- The *Course Guide* includes a "Year-at-A-Glance" document listing each module, the total number of instructional days, and the TEKS to be taught in the unit. The focus standards [TEKS] are in boldface.

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 *Course Guide* includes a "Grade 1 Year-At-A-Glance" document for 165 days of instruction. The Year-at-a-Glance document is in table format and includes a column for each of the six modules in the course, the module title, the number of instructional days, and the TEKS.
- The materials include a "Grade 1 Additional Days School Year" (ADSY) resource. This resource provides lessons to supplement "core instructional materials." The lessons can extend the course by up to 30 instructional days. In addition, "Each ADSY lesson reviews a specific TEKS [and] can be used to respond to data after an assessment." The ADSY allows flexibility in scheduling these days throughout the school year, including an option to extend the school year. The materials included in the ADSY module support effective implementation for 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* includes a "Sequence of Grade 1 Modules" aligned with the TEKS section that provides a rationale for the order of units, explaining how the knowledge and skills in each module build upon learning and make connections across the units. For example, in "Module 1," "students work with numbers to 10," and in "Module 2," "students add and subtract within 20." 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 2 describes the connection to "Module 5." The overview states, "Throughout the year, students have explored part-whole relationships.... In module 5, students consider part-whole relationships through a geometric lens."

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

- The materials include an *OER 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 "Teacher Lesson Internalization Protocol," which includes a step-by-step process for understanding each lesson before teaching. In addition, materials provide explanations of fluency practice, application problems, concept development, problem sets, student debriefs, and exit tickets.
- The *OER 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 unit's objectives, sequence, and pacing of activities. It enables comprehensive preparation for teaching by 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 resources and guidance for administrators and coaches. In the *K–5 Math Program and Implementation Guide*, there are 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.
- In the *OER K–5 Program and Implementation Guide*, the "Observation Protocol" is a resource provided for coaches and administration to record key observations during classroom instruction. The materials state, "The Observational Protocol Tool is a resource for coaches and administrators to document specific look-for while observing teachers' instruction and implementation of high-quality instructional material (HQMI). It is not designed to be an evaluation tool."
- The *OER K–5 Math Program and Implementation Guide* includes a "Student Work Analysis Protocol" that includes notes for coaches looking at student work with teachers.

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 *Teacher Edition* features a "Module Overview" at the beginning of each module. The overview explains the concepts covered in each topic and includes common student misconceptions and actions to take when addressing misconceptions.
- The Module Overview includes a "Terminology" section that includes new vocabulary, visual aids, and Spanish cognates when applicable.

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

- The *Course Guide* offers tips for families in bulleted checklist format for each module with "Key Concepts" overviews. Visual aids are also provided to enhance the understanding of these concepts. Both English and Spanish versions are available.
- The *Course Guide* includes suggestions for how families can support their student's learning at home. These suggestions include games to play and questions to ask the student, with resources 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.

- 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. The lesson overview does not contain language objectives. Some lessons also include additional teacher guidance in the form of margin notes offering support for language and scaffolding activities aligned with the ELPS. For example, the "Notes on Multiple Means of Action and Expression" under "Concept Development" for Module 5, Topic A, Lesson 3, includes a suggestion for the teacher to maintain a pictorial word wall to support students with learning and using the names and attributes of shapes. The "Overview of Module Topics and Lesson Objectives" includes an ELPS list for each topic.
- The materials contain questions, tasks, materials, and instructional assessments aligned to the language standards (ELPS) of the lesson. For example, Module 5, Lesson 2, "Concept

Development," aligns to ELPS 2.C, one of the language standards for the lesson. This section allows students to learn academic vocabulary heard during classroom instruction and interactions while the teacher introduces boldface terminology in the vignette, then has students interact with that terminology in the "Problem Set," "Student Debrief," "Exit Ticket," and "Homework."

- The *Teacher Edition* for modules 1–6 includes a section called "Suggested Lesson Structure" at the beginning of each lesson. This section is organized into four parts: "Fluency," "Application," "Concept Development," and "Student Debrief." The timing for each section and the total time for the lesson are included.
- Instructional assessments are integrated throughout the course materials. Each module includes a "Mid-Module Assessment Task," "End-of-Module Assessment Task," and Exit Tickets for each lesson. Detailed teacher guidance for informal instructional assessment opportunities is provided within individual lesson components.
- Lesson plans include a list of teacher questions and potential student responses for each lesson. For instance, Module 3, Topic C, Lesson 8 includes a Concept Development section with the teacher question: "We have different answers, and some people didn't even get to finish counting! How can we organize the data so we can count more efficiently and see more easily?" followed by the student responses "Group them by twos. Group them by fives. Put them in 5-group rows."

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

- The materials include a lesson overview with a recommended schedule outlining the timing for each component. The duration of each task is itemized individually, with a cumulative time total provided. For example, Module 6, Topic A, Lesson 1 provides the "Suggested Lesson Structure" of Fluency Practice for 12 minutes, Concept Development for 38 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 Lesson 1 of Topic A in Module 2, there are three fluency activities to complete within 12 minutes. Each activity has a suggested time allotment: "Fluency Differentiated Practice Sets" for five minutes, "Number Bond Addition and Subtraction" for five minutes, and "Happy Counting" for two minutes.

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

- The "Module Overview" includes a list of recommended materials for the module, categorized as (T) for teacher materials and (S) for student materials.
- The Module Overview has a list of suggested tools and representations that include both concrete materials and pictorial models. Teachers utilize these charts to ensure they have all the necessary materials well in advance.
- The *Course Guide* and the "Manipulatives List" include a comprehensive list of student and teacher materials required to effectively deliver all lessons. Following the Tools and

Representations section of each Module Overview, the materials provide a table with a Lesson Overview Materials List. The table lists the teacher materials and student materials by lesson for the Module. In each lesson, the materials needed are included under the task headings. For example, in Module 4, Topic B, Lesson 8, listed under Fluency Practice for the "1 More/Less, 10 More/Less Activity," the materials needed include "(S) Personal math toolkit (4 ten-sticks, 4 dimes, and 10 pennies), personal whiteboard, large place value chart (Fluency Template)." For the Concept Development activity, the materials needed include "(T) Enlarged dimes and pennies for display, large place value chart (Fluency Template)," and "(S) Numeral cards 0 – 10 (Lesson 4 Fluency Template), dimes and pennies from personal math toolkit."

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

- The *OER K–5 Math Program and Implementation Guide* includes guidance on homework usage in the Lesson Structure section. It emphasizes that homework aims to reinforce understanding and confidence with previously learned material rather than introduce 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 *OER K–5 Math Program and Implementation Guide Implementation Guide* suggests utilizing the lesson's Fluency component for additional practice outside of school hours.
- The *OER K–5 Math Program and Implementation Guide* includes guidance on using the extension problems found in the student Problem Sets for each lesson, such as "Teachers are encouraged to think flexibly and adjust the Problem Set depending on the needs of their students." Additional guidance is provided, along with suggestions for how teachers could flexibly use the materials to meet their students' needs.
- 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 the Teacher Edition, Module 4, Topic D, Lesson 18, Concept Development, an MME box suggests acting out a specific problem to help students better understand the context of the problem.

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 materials include "Mid-Module Assessment Tasks" and "End-of-Module Assessment Tasks" in grade 1 to assess student progress and identify misconceptions. This assessment helps monitor learning objectives and guide instructional planning. The assessments include open-ended and fill-in-the-blank question types.
- The materials include lesson-level exit tickets for grade 1, which vary in type and include solving with manipulatives, drawing pictures, and fill-in-the-blank. In addition, lesson-level application problems are included which are open-ended.
- The materials include a suggestion for using the mid-module assessment questions as a diagnostic.
- Diagnostic assessments are included throughout the lesson, as outlined in the *OER K–5 Math Program and Implementation Guide*. For example, "Fluency Practice" has three goals, including "Anticipation (skills that ensure students are ready for the in-depth work of upcoming lessons)." Also, "Application Problems" are "used to activate schema or prepare students for new learning." Lastly, the "Exit Tickets" have two purposes, which are "indispensable for planning purposes" of future lessons. The "ADSY Pre- and Post-Tests by Topic," with uses outlined in the second paragraph of the overview, could also be used as a

diagnostic assessment to "adjust instruction as needed." According to the Assessment Guide, 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."

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

- The grade 1 *Assessment Guide* defines the various types of assessments, such as observational, mid-module, and end-of-module assessments.
- The grade 1 *Assessment Guide* thoroughly explains the purpose and rationale behind each assessment as well as when to administer them.
- 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 *OER K–5 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.

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

- The grade 1 *Assessment Guide* offers teacher guidance on assessment implementation, including suggested additional days for mid-module and end-of-module assessments.
- The *Assessment Guide* includes rubrics for each assessment to ensure confident scoring support for accurate administration. Allotted time for administering, analyzing, and supporting student understanding is included as well.

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

- The materials include summative assessments in grade 1, which demonstrate alignment with the TEKS and objectives of the course, unit, and lesson.
- The materials include formative assessments in grade 1 that demonstrate alignment with the lesson objectives and TEKS. According to the *K–5 Math Component Navigation Guide* and *OER K–5 Math Program and Implementation Guide*, formative assessments include Problem Sets, Exit Tickets, Sprints, Observational Checklists, and Mid-Module Assessments, which are all aligned to the TEKS and objectives of the course, unit, or lesson. The aligned TEKS for these lesson components are located in the Course Guide, the "Module Overviews," and the Assessments book.
- The materials in grade 1 include diagnostic assessments aligned with the TEKS and objectives of the course, unit, or 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 Guide, 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 are found within the rubrics, as outlined, for example, on the "Module 1 Mid-Module Assessment." Another TEKS-aligned diagnostic assessment is found within the "Fluency and Application Problems," as outlined in the *OER K–5 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 include mid-module assessments and end-of-module assessments in grade 1, with at least two levels of complexity, such as drawing, number bonds, and number sentences. For example, the "Module 1 Mid-Module Assessment" shows several levels of complexity and is standards-aligned.
- The materials include lesson-level exit tickets for grade 1. The exit tickets include open-ended items, fill-in-the-blank, completing number lines, and multiple-choice items.

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.

- The *Assessment Guide* includes instructions on how to address student performance on assessments. The assessment guide provides "A Progression Toward Proficiency" to help teachers evaluate student strengths and misconceptions by providing a clear progression toward proficiency and identifying student abilities.
- The materials include a "Class Record Sheet" in the *Assessment Guide* for teachers to track student progress on topics, with the last column designated for the next steps.

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

- The *Teacher Edition* includes lesson notes for teachers to support the differentiation of students at different proficiency levels. 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.
- Each module in the *Teacher Edition* includes a section titled "Collaboratively Troubleshooting Student Misconceptions," which includes a chart that identifies potential student misconceptions. It lists various tasks and activities designed to address these misconceptions. For example, in Module 5, a common student misconception is that "Students think rectangles are squares (e.g., 'Rectangles have square corners, so they are squares.')." The recommendation for "Bridge to Better Understanding" is to "Show two rectangles and a rhombus. Ensure one of the rectangles is a square. Have students discuss

their defining attributes and chart them to compare." A list of guiding questions is also provided.

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

- The *Course Guide* includes a chart titled "Assessment Reflection Tool." This tool is designed to help 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."
- In the *OER K–5 Math Program and Implementation Guide*, the "Fluency Practice" section 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 *Teacher Edition* for grade 1 features a "Module Overview," which includes a table to support educators with common misconceptions and provides examples to support teachers in growing student proficiency. The table also provides sample guided questions to support students in reaching proficiency.
- In the grade 1 lessons, margin notes can be found with ideas to support students who have not yet demonstrated proficiency. The margin notes found in the lessons include support for the different components of the lesson. For example, in Module 2, Lesson 4, the margin note states "Assign students a measurement discovery buddy to clarify directions and processes."
- The ADSY module, "Additional Days School Year," has 25 lessons. The overview states that these lessons can be used independently based on student needs. This module is a limited resource to address students who have not reached proficiency in grade-level standards.

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

- There are several opportunities for pre-teaching vocabulary, as outlined in the *OER K–5 Implementation Guide*. Teacher guidance states, "In addition, use the Terminology resource to generate supports for students. Show students the visuals from the teacher-facing Module Overview that correspond to the terminology and encourage them to naturally use the terminology as they respond in class to discussion questions or in Turn and Talks." Guidance

for teachers also suggests using the list to follow the conceptual understanding of the mathematics with just-in-time supports to help internalize words.

- The *Teacher Edition* for grade 1 features a Module Overview, which includes a list of terminology with a definition and a picture. When the words are found in the material, they are bolded. Margin notes in the lessons include ideas for turn and talk to practice words. Spanish cognates are included where applicable. For example, in Module 5, Lesson 11, the margin note suggests that the teacher use gestures and visuals to support the language of halves and fourths.
- Embedded support for academic vocabulary is in the margin notes of the lessons. For example, in Module 1, Lesson 12, Multiple Means of Representation, there is an opportunity to pre-teach unfamiliar words used in the lesson. The margin notes state, "Introduce unfamiliar words by saying 'hibernation' while showing a picture of a bear hibernating in a den and making a gesture for sleeping, and saying 'out of hibernation' while showing a picture of bears awake in their natural environment."

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

- The materials include teacher guidance as margin notes with extension ideas for students who have demonstrated proficiency. During the application problem, there may be an extension of additional practice for students at proficiency. For example, in Module 2, Lesson 25, the margin note suggests giving the students a false statement that they need to make true.
- The materials include teacher guidance for educators to support differentiated instruction and enrichment opportunities for students who have demonstrated proficiency. For example, the materials have differentiated enrichment instruction for students who have demonstrated proficiency, as noted in Module 1, Lesson 24. In the "Exit Ticket," the last problem is a "Challenge" problem. The challenge provides an opportunity for students to code doubles, +1, +2, and doubles +1 facts in more than one way. Also, in Module 1, Lesson 7, the Multiple Means of Engagement box states, "For those students who are ready for a challenge, give them ways to expand today's lesson to other decompositions they have practiced," and provides an opportunity for enrichment. Differentiated instruction for students who have demonstrated proficiency is noted in Module 1, Lesson 21. The Multiple Means of Engagement margin note states, "For students who have reached proficiency..." and provides a recommendation for differentiation.
- The *OER K–5 Math Program and Implementation Guide* states that the four-part lesson design has the goal of supporting the expectations outlined in the ELPS by including the embedded instructional best practices paired with linguistic accommodations for building vocabulary, comprehension, and knowledge.

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).

- The *Teacher Edition* includes prompts and guidance to support the teacher in modeling the concept to be learned. For example, in Module 4, Lesson 14, the teacher models $4 + 2$ with linking cubes. The materials include guidance for teachers on how to model the concept and include notes to support navigation through the lesson.
- The *Teacher Edition* includes vignettes in the "Concept Development" section of each lesson, as a guide for teachers to explain the concepts. In addition, the lessons include notes and questions to support teachers in explaining the activities explicitly. For example, in Module 4, Lesson 16, the vignette guides the teacher in explaining how to use a strip diagram to represent a word problem and questioning the students on the relationships shown.
- The *Teacher Edition* clearly guides teachers in communicating prompts to guide students through each lesson effectively. Additionally, the materials provide support through notes and questions to guide teachers in effectively communicating concepts within the lessons.

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

- The *Teacher Edition* includes teacher guidance for lesson delivery, with each lesson following a consistent section. In each lesson, there are a variety of delivery strategies, including fluency and questioning to check for understanding. The lessons include questioning techniques to encourage higher-level thinking and pedagogy practices such as turn-and-talk. In the "Student Debrief" section of a lesson, there is guidance for the teacher to facilitate conversation and reflect on the lesson.

- The materials include several instructional approaches, including small-group instruction. For example, in Module 2, Lesson 25, the vignette guides teachers to direct students to work in small groups for the Concept Development and "Problem Set." In Module 3, Lesson 9, there is a note to provide small group instruction for students as needed in the Problem Set.

Materials support multiple types of practice (e.g., guided, independent, collaborative) and include guidance for teachers and recommended structures (e.g., whole group, small group, individual) to support effective implementation.

- The instructional materials include a variety of practice activities. Each lesson includes a Fluency Practice portion led by the teacher, as well as a "Problem Set" completed either collaboratively during Concept Development or independently afterward. The lessons include guidance for teachers on how to effectively incorporate Fluency Practice and Problem Sets. Detailed instructions within the materials outline opportunities for both whole group and partner work during Fluency Practice. Additionally, all lessons feature a problem set for students to work on independently. Students are encouraged to collaborate during "Application Problems" and Concept Development, with a focus on whole-group guided practice during Concept Development and independent practice during Problem Sets.
- The *OER K–5 Math Program and Implementation Guide* includes guidance for teachers and recommended structures to support effective implementation. For example, the guidance states, "Responsive instruction includes flexible groups that change frequently based on students' needs." Options for groupings include addressing misconceptions, applying scaffolds and extensions recommended in margin notes, pairing for mathematical or English language proficiency, and grouping students who are above proficiency levels.

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 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 *OER K–5 Math Program and Implementation Guide* includes teacher guidance on linguistic accommodations for ELPS, which are designed to engage students in using increasingly academic language. Teacher guidance for supporting emergent bilingual students is provided in lesson margin notes throughout the lessons. In addition, sentence stems can be found to support language proficiency.
- The materials include guidance to support students who have different levels of English language proficiency. For example, in the *OER K–5 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 *OER K–5 Math Program and Implementation Guide* states that the four-part lesson design has the goal of supporting the expectations outlined in the ELPS by including the embedded instructional best practices paired with linguistic accommodations for building vocabulary, comprehension, and knowledge. Built-in supports for implementation provide what emergent bilingual students need to engage with the language-rich lessons. The four-part lesson design infuses the following: mathematics as a coherent story, assessment practices to identify misconceptions and provide timely feedback, and multiple entry points to the mathematics.
- Also, the *OER K–5 Math Program and Implementation Guide*, "Differentiation and Scaffolds" section highlights scaffolds that can be done with students in whole-group, individual, or small-group settings. The materials state "Pair students who have different levels of mathematical proficiency and students who have different levels of English language proficiency." Guidance suggests groups be flexible and change frequently based on students' needs.
- The *OER K–5 Math Program and Implementation Guide*, "Support for Emergent Bilingual Students" section includes "Elements of Sheltered Instruction." Linguistic accommodations for building vocabulary include pairing written terms with a representation, visual cue, or gesture. The materials include guidance in the lesson body and in margin notes to support implementation of linguistic accommodations, building comprehension and knowledge.
- The *OER K–5 Math Program and Implementation Guide* has several sections that support teachers in using the materials with emergent bilingual students. For example, the "Support for All Learners" section unpacks the different margin notes that the materials offer. The margin notes include suggestions based on three learning principles: multiple means of representation, multiple means of action and expression, and multiple means of engagement.

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 materials include teacher guidance in lesson margin notes to support emergent bilinguals in developing academic vocabulary through oral discourse and comprehension through oral questioning. These margin notes provide support for both students and teachers in this process, including opportunities for oral discourse activities with peers using real objects and pictures. The material includes margin notes that provide tips for differentiation for emergent bilingual students. For example, in Module 2, Lesson 5, the margin notes state, "It is effective to partner important vocabulary with captions or pictorial representations for all students. It is especially beneficial to some emergent bilingual students and students with hearing impairments." "

- The materials provide opportunities for building background knowledge and making cross-linguistic connections through oral discourse. An example of building background knowledge and an example of a cross-linguistic connection through oral discourse is in Module 1, Lesson 21, in the Notes on Multiple Means of Action and Expression margin notes where students use a cognate for the word double to build background knowledge and also make the cross-linguistic connection.
- The 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 written discourse.
- The materials include continuous opportunities for students to fill in sentence stems with numbers. Module 5 prompts ask students to explain why they chose a name for a shape. As a part of the Read-Draw-Write problem-solving strategy of the materials, students write an answer statement when engaging with word problems. In the *OER K–5 Math Program and Implementation Guide*, the section titled "Lesson Structure" and within "Discourse and Elaboration" supports oral and written discourse. Another example of a writing opportunity that is developmentally appropriate for first grade is in Module 1, Lesson 24, where students are asked to use pictures or words to explain their thinking in the "Application Problem."

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

- The materials are not designed for DLI programs. Materials include resources that outline opportunities to address metalinguistic transfer from English to the partner language. The materials include resources to address metalinguistic transfer from English to the partner language. For example, the *OER K–5 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.

- There are several examples of how the materials provide practice opportunities at the lesson and unit level that require students to demonstrate depth of understanding aligned to the TEKS. The first example is the overview in the *OER K–5 Math Program and Implementation Guide*: "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." Also, in the "K–5 Math Grade 1 Assessment Metadata," for each question, there is a "Knowledge & Skills" callout for the depth of knowledge and understanding that is related to the question.
- The materials include practice that fully aligns with the depth of understanding required by TEKS at the lesson level. For example, the TEKS aligned to Module 2 requires students to solve problems with the unknown in any position. The practice in this lesson includes solving word problems within 20 with only the result unknown. In Lessons 22–24, students are asked to solve a problem where the unknown is in another position. Another example of students demonstrating the full depth of understanding aligned to TEKS 1.3C, for example, can be found in Module 1, Mid-Module Assessment, and Module 2, Mid-Module Assessment.
- In Module 2, Topic C, the materials include different strategies to solve problem situations. The "Concept Development" prompts students to discuss their problem-solving with a partner. In Module 2, Lesson 14, the lesson objective is to model the subtraction of nine from teen numbers and generate story problems given a number sentence. Students can model or generate stories using the problem set. Students are asked questions in Module 2, Lesson 14, and the Student Debrief section to demonstrate their depth of understanding aligned to TEKS 1.3F.

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

- As students progress through each module, the problem sets increase in rigor. For example, in Module 2, Lesson 4, students utilize drawings to aid in adding within 20 using a make-10 strategy. By Lesson 20, students solve equations without visual aids. Over the course of topics, the complexity of problem sets increases. For example, in Module 1, the materials increase in rigor and complexity with the solving of different types of word problems, *result unknown* to *change unknown*. In Module 3, Lesson 2, the exit ticket focuses on measuring and recording the length of an object, whereas in Module 3, Lesson 7, the exit ticket tasks include modeling, drawing, and comparing two lengths. In Module 5, Lesson 2, an application problem involves a separate story. By Lesson 9, the materials include solving a comparing story and providing explanations for their reasoning in words.
- During the student debrief section of lessons, teachers gradually increase the rigor of questioning as they progress throughout the academic year. For example, in Module 4, Lesson 8, the questions focus on fundamental concepts of comparing two-digit numbers. In Module 6, Lesson 3, the questions become more rigorous and require a higher level of thinking. The purpose of the "Student Debrief" section is to assess student understanding, with questions becoming more complex over time. For example, in Module 1, Lesson 16, the materials include identifying similarities and differences between problems, while in Module 1, Lesson 9, questions can be answered in just one or two words. As lessons progress, such as in Lesson 30 of Module 1, Student Debrief questions require a deeper level of knowledge and comprehension. In Module 4, Lesson 5, the questions are clear and direct. In Module 4, Lesson 8, the students are required to provide detailed responses to open-ended questions.

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 materials include a logically sequenced and connected scope and sequence. The "Grade 1 Scope and Sequence" outlines the progression for instructing grade 1 content. It begins with foundational concepts such as sums and differences up to 10 in Module 1, then moves to addition and subtraction within 20 in Module 2. The previous module introduces concepts that are built upon in the following modules. The modules are logically sequenced to build upon the concepts introduced in the previous module. For example, Module 2 focuses on numbers up to 20, while Module 6 covers numbers up to 100.
- The *Course Guide* in grade 1 includes a comprehensive table outlining the progression of mathematical concepts. This table establishes a sequential order for the progression of math concepts from one grade level to the next, offering a rationale for the organization of modules within the instructional materials.

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

- The materials demonstrate coherence by establishing connections between modules. For example, the materials introduce different types of addition and subtraction problems before

progressing to solving a variety of word problems. In Module 4, topic B complements topic A. As students compare numbers, they connect their knowledge of place value and employ proper academic terminology.

- The materials provide comprehensive summaries of the big ideas for each topic within the module, including the objectives and connections between lessons. For example, the Module 5 Overview includes the key ideas and essential concepts, tools, and representations utilized throughout the module. The materials demonstrate coherence by connecting relationships between modules. For example, in Module 2, students explore the relationship between addition and subtraction using various strategies. Students apply their understanding in Module 6 to solve comparison problem types. The lessons in Module 2 build upon the foundational knowledge from previous lessons. Additionally, the materials include coherence by connecting the relationships among grade-level lessons with those from previous grades. For example, in grade K, students compare two objects using a shared measurable attribute to identify which has more or less and describe the difference. This lesson leads to measurement in various units in grade 1.

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 Module Overviews explain how grade 1 builds upon the standards introduced in grade K. For example, students apply their knowledge of one more and one less from grade K to compare larger numbers in grade 1. According to the "Familiar Terms and Symbols" section of the Module Overview, the language in grade 1 aligns with the language used in grade K materials. In Module 2, Lesson 1, students expand on the make-ten strategy from grade K to add three numbers together. In Module 5, students work with halves and fourths, which connects to adding eighths in grade 2. This understanding develops further in Lesson 15 in Module 4, focusing on developing foundational skills of addition and subtraction up to 10, which connects to grade 1, Module 1, and sums and differences up to 10

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.

- In the Module 1 materials, students explore numbers up to ten using groupings of five. The initial twelve lessons in this module focus on reviewing concepts from grade K. Moving on to Module 2 of grade 1, teachers guide students to make connections between different addition processes, such as understanding the efficiency of counting on versus counting all and the usefulness of grouping numbers in fives. The teacher's instructions include academic vocabulary new to grade 1 to ensure students have the necessary background knowledge. The sequencing of modules in grade 1 is purposeful, with later modules revisiting and expanding upon skills learned in previous modules. For instance, Module 4 revisits place value concepts from Module 2, reinforcing the skill of creating groups of ten when working with larger numbers.

- In Module 6, students explore the efficiency of counting by tens in comparison to counting by fives while also identifying patterns in numbers that are 10 more or 10 less, reinforcing the importance of place value in ordering and comparing whole numbers. Lessons on addition use place value to break down numbers and solve problems effectively. Fluency sprints provide additional practice for students to improve their fluency in addition and subtraction through strategic problem-solving. The materials in grade 1 bridge prior knowledge with new mathematical concepts, such as understanding numbers sequentially up to 20 in grade K and comparing numbers up to 100 using symbols in grade 1.

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 grade 1 modules include fluency activities in each lesson, which allow for spaced retrieval opportunities of previously learned skills. The activities progressively build upon each other within and across units. The application problems included in the lessons contain spaced retrieval practice of concepts learned in earlier lessons. The application problem is typically provided to support learning of the current concept.
- In Module 2, Lesson 1, the focus is on place value in the context of addition and subtraction. Students are given opportunities to practice this concept in Module 2, Lesson 27, where they solve addition and subtraction problems by breaking down and combining numbers.

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

- The materials provide spaced retrieval opportunities with previously learned skills across units. For example, using the make-ten strategy is first introduced in Module 2. It is then practiced across several modules, including in a Module 3 fluency activity and then again in Module 4 as a fluency activity and in a Concept Development. It is also in several fluency activities, including as an extension activity in Module 5. In addition, the Mid-Module and End-of-Module Assessments assess multiple SEs across multiple lessons, providing interleaved practice within each assessment.
- Lessons within each module incorporate previously learned concepts into some of the problem sets. For example, in Module 2, Lesson 27, the Problem Set includes three different types of problems to reinforce understanding of various concepts. The materials include interleaved practice by revisiting the same concept with increasing levels of difficulty. For example, students will first learn problem structures for numbers up to 10, then progress to numbers up to 20, and eventually extend their learning to numbers up to 100.
- All lessons within Topic D of Module 4 focus on mixing varied problem types to facilitate interleaved practice throughout each section. For instance, in Module 6, Lesson 1, the focus is on comparing problems, with all problem set questions centered on this specific type of

problem. The modules incorporate interleaved practice by revisiting concepts at increasingly complex levels. This strategy enables educators to confirm proficiency in concepts before progressing to more advanced levels.

- The materials consist of problem sets for students that reinforce a specific skill related to the current lesson. For instance, in Module 4, Lesson 12, students engage in exercises to show proficiency in the use of symbols for comparing quantities and numerals. The materials also feature interleaved practice, combining previously learned concepts within problem sets. In Module 4, Lesson 2, for example, students represent and break down two-digit numbers into groups of tens and ones.

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

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

- The "Concept Development" section of the materials provides guidance to engage students in discussions interpreting various mathematical models. In Module 4, Lesson 18 offers opportunities to analyze how to solve a variety of word problems. Module 4, Lesson 1, prompts students to explore various approaches to problems with unknown results by engaging with pattern blocks. The Concept Development section in Module 3, Lesson 2 uses models such as linking cubes and drawings of strip diagrams to analyze subtraction strategies for students. Module 6, Lesson 7, prompts students to analyze different representations of the same number (objects, pictures, expanded and standard forms) in the problem set.
- In Module 1, Lesson 17, the materials prompt students to interpret images of fruit plates and write expressions using comparison symbols. Students work with different models in these lessons to understand concepts. In Module 2, Lesson 1, the materials prompt students to explore strategies to make ten when solving a story problem and then illustrate the corresponding picture.
- Module 4, Lesson 8, "Problem Set," incorporates number lines to help students order numbers effectively. The "Student Debrief" in this lesson prompts students to evaluate the measurements of a crayon using paper clips and centimeter cubes and interpret why they needed more centimeter cubes for accurate measurement.

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

- The materials in grade 1 use drawings, number bonds, and number sentences to represent mathematical situations in the modules. In Module 2, Lesson 9, the materials prompt

students to create a drawing, a number bond, and a number sentence to solve an application problem. Module 3, Lesson 2, includes models such as linking cubes and strip diagrams to reinforce subtraction strategies in the Concept Development section. Creating a strip diagram and a number sentence demonstrates an understanding of addition and comparison concepts in the problem set. Students are prompted to demonstrate their understanding of the application problem by drawing a picture, writing a number sentence, and creating two number bonds.

- Module 1, Lesson 17, prompts students to create different number models using linking cubes. The materials prompt teachers to facilitate a discussion around comparisons. In the problem set portion of this lesson, students create visual representations. Module 4, Lesson 33, prompts students to draw visual representations of mathematics problems and create corresponding number sentences. The materials prompt the teacher to challenge students to create their own models to solve application problems and provide evidence of their solutions' accuracy.

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

- The Concept Development sections of the material guide the teacher to prompt students to apply their conceptual understanding to new situations. Module 1, Lesson 26, provides opportunities for the students to use their knowledge of counting forward and backward to solve subtraction problems by adding numbers instead. The materials provide opportunities for students to apply the content learned from previous lessons to solve new problems and situations presented in the application problem. Module 4, Lesson 7, prompts students to apply their understanding of units of ten, which the materials introduced in previous lessons. In Module 4, Lesson 4, the debrief sections prompt students to reflect on learning and apply it to new situations. The problem set in Module 6, Lesson 8, prompts students to apply their learning to new problem scenarios in the materials of that lesson.
- In Module 4, Lesson 4, the Student Debrief section prompts students to reflect on their learning and apply it to new situations. The materials guide the teachers in asking questions to identify similarities and differences in problems to help transfer knowledge to different contexts. Module 6, Lesson 8, Problem Set, provides opportunities for students to solve new problem scenarios. Module 5, Lesson 8, provides opportunities for students to apply their understanding of place value to determine the values of depicted items using pictorial models and place value charts. The materials prompt students to describe different parts of a diagram in terms of magnitude and count by adding one penny at a time during the student debrief section in this module.

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

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

- In Module 2, Lesson 24, students complete "Fluency Practice" designed to build their automaticity and fluency. For instance, they participate in a sprint to identify missing subtrahends within 10. This activity supports them during the problem-solving portion of the lesson. In Module 4, Lesson 1, students engage in Fluency, which helps them comprehend the concepts being developed. For instance, changing 10 pennies for one dime during a fluency activity in Module 4 assists them in understanding the concept in grade 1, Module 6.
- In Module 6, Lesson 14, students count numbers forward and backward to build automaticity. The fluency practice in the lessons helps develop student fluency and supports concept development. In Module 6, Lesson 10, students use coins to skip count and compare numbers up to 120. In Module 2, Lesson 1, students complete sprints, focusing on improving their ability to finish facts within a set timeframe in each sprint.

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

- In Module 2, Lesson 24, students complete "Fluency Practice" designed to build their automaticity and fluency. For instance, they participate in a sprint to identify missing subtrahends within 10. This activity supports them during the problem-solving portion of the lesson. In Module 4, Lesson 1, students engage in Fluency, which helps them comprehend the

concepts being developed. For instance, changing 10 pennies for one dime during a fluency activity in Module 4 assists them in understanding the concept in grade 1, Module 6.

- In Module 6, Lesson 14, students count numbers forward and backward to build automaticity. The fluency practice in the lessons helps develop student fluency and supports concept development. In Module 6, Lesson 10, students use coins to skip count and compare numbers up to 120. In Module 2, Lesson 1, students complete sprints, focusing on improving their ability to finish facts within a set timeframe in each sprint.

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

- In Module 2, Lesson 24, students complete "Fluency Practice" designed to build their automaticity and fluency. For instance, they participate in a sprint to identify missing subtrahends within 10. This activity supports them during the problem-solving portion of the lesson. In Module 4, Lesson 1, students engage in Fluency, which helps them comprehend the concepts being developed. For instance, changing 10 pennies for one dime during a fluency activity in Module 4 assists them in understanding the concept in grade 1, Module 6.
- In Module 6, Lesson 14, students count numbers forward and backward to build automaticity. The fluency practice in the lessons helps develop student fluency and supports concept development. In Module 6, Lesson 10, students use coins to skip count and compare numbers up to 120. In Module 2, Lesson 1, students complete sprints, focusing on improving their ability to finish facts within a set timeframe in each sprint.

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

- In Module 2, Lesson 24, students complete "Fluency Practice" designed to build their automaticity and fluency. For instance, they participate in a sprint to identify missing subtrahends within 10. This activity supports them during the problem-solving portion of the lesson. In Module 4, Lesson 1, students engage in Fluency, which helps them comprehend the concepts being developed. For instance, changing 10 pennies for one dime during a fluency activity in Module 4 assists them in understanding the concept in grade 1, Module 6.
- In Module 6, Lesson 14, students count numbers forward and backward to build automaticity. The fluency practice in the lessons helps develop student fluency and supports concept development. In Module 6, Lesson 10, students use coins to skip count and compare numbers up to 120. In Module 2, Lesson 1, students complete sprints, focusing on improving their ability to finish facts within a set timeframe in each sprint.

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

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

- The Module 4, "Module Overview" explains connections from conceptual to procedural understanding. For example, in Module 4, the overview discusses using the conceptual understanding students have built about tens and ones to move toward a procedure of comparing two-digit numbers. Each topic within a module explains what happens in the corresponding lessons. This explanation outlines the conceptual and procedural aspects of the lessons. In Module 4, Topic D, connections between the conceptual understanding of problem types and the procedures of equations as the size of the numbers leads the transition from pictorial to abstract representations. The modules cover and emphasize the essential conceptual and procedural ideas throughout. Module 3, Topic A, includes an explanation for the conceptual development and reasoning behind the mathematical procedures used in each topic lesson.
- The Module Overview in the materials provides teacher guidance on how the concepts are taught in the topics. The Module Overview makes connections with learning conceptually or procedurally based on the TEKS. Module 4, Topic B, compares two-digit numbers, starting with concrete models and progressing to other methods for comparison, using symbols to represent the comparisons. The lesson structure in Module 4 is designed for students to understand the concepts of greater than and less than using place value, number lines, and arranging numbers. By the end of the lesson, students represent their understanding with symbols, aligning with TEKS 1.2E and 1.2G requirements.

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

- In grade 1, the use of concrete models, such as linking cubes, establishes connections between concrete objects and the pictorial and abstract representation of quantities. For instance, Module 1, Lesson 3, prompts students to apply the counting-on strategy by manipulating linking cubes. The "Problem Set" demonstrates the same concept with pictures and number sentences. In the "Concept Development" section of Module 6, Lesson 22, students are tasked to connect coins to the place value chart. They are then prompted to match the pictorial representations of the money to the place value chart in the problem set.
- The Concept Development section in Module 5, Lesson 16, on time, prompts teachers to use real clocks, watches, and timers to allow students to experience hands-on clocks. Module 2, Lesson 20, questions students to solve the problems using drawing or number bonds. This question enables students to connect pictorial representations to the abstract number sentence.
- Module 4, Lesson 14, tasks students with using concrete models, such as ten sticks, to connect with pictorial and abstract number representations and demonstrate the concept of adding groups of ten. This action increases the tens place value. The next task is to draw number bonds and number sentences to illustrate the concept. In Module 3, Lesson 6, Problem Set, students use centimeter cubes to create models and draw pictures, write number sentences, and make statements. They incorporate concrete, pictorial, and abstract representations.

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

- The "Student Debrief" in the lesson guides the teacher in supporting students in making connections between concrete models, representational models, and abstract concepts. For example, in Module 6, Lesson 9, the Student Debrief sections provide teacher guidance on questions to help connect pictorial representations to abstract place values and find numbers that are greater. The "Read, Draw, Write" strategy supports solving problems by creating pictorial representations, justifying solutions through writing, and providing abstract equations. The application problem in Module 4, Lesson 14, serves as an illustration of this process.
- Module 6, Lesson 12, uses pictorial models to make connections to place value charts. In addition, it also prompts students to create numbers using abstract methods. Module 5, Lesson 6, prompts students to make connections between real-world figures and geometric terms. They define these terms using academic language and create their own examples of 3-D figures.
- Module 3, Lesson 3, tasks students with measuring items using centimeter cubes and writing the corresponding number in the given sentence. They then complete a sentence stem to express their comprehension. Module 6, Lesson 6, Concept Development, prompts students to create strip diagrams and number sentences to connect problem-solving with algorithms.
- Module 1, Lesson 9, uses number bracelets to model and subtract numbers. The students are then tasked with writing a number sentence and number bond to represent the models

created. The "Application Problem" for Module 3, Lesson 5, prompts students to build and draw centimeter cubes to represent a separate situation. Then they are tasked to write a number sentence to answer the question and debrief by connecting the concrete experience with computation.

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 provide opportunities for students to develop their academic mathematical language using visuals. During Module 1, Lesson 2, "Concept Development," the teacher uses visuals and manipulatives to help students develop academic vocabulary. In this lesson, the teacher presents a visual of seven apples to introduce the count-on strategy. In grade 1, students play games to solidify their understanding of vocabulary words. In Module 4, Lesson 8, they play a comparison card game where they describe the totals using the words greater than or equal to.
- Materials provide opportunities for students to develop their academic mathematical language using manipulatives. Students learn the word attribute in Module 5, Lesson 1, using straws and creating pictures for demonstration. The teacher guides them in creating anchor charts to help them remember this mathematical term. The materials bold or italicize academic mathematical language to emphasize its importance during the lesson. During Module 5, Lesson 1, Concept Development, the teacher is instructed to use margin notes to teach new academic mathematical vocabulary, including side, vertex, and corner, using visuals to aid student understanding.

- The margin notes in Module 3, Lesson 16, support pictorial representations or manipulatives to help students learn new vocabulary. In Module 4, Lesson 2, the "Student Debrief" includes guiding questions that help students solidify their understanding of the new vocabulary introduced in the previous lesson.
- In Module 2, Lesson 1, the teacher introduces academic vocabulary using visuals and manipulatives during Concept Development. To explain the count-on strategy, the teacher uses visual aids consisting of nine triangles, one square block, and four trapezoid blocks. In Module 2, Lesson 19, the materials prompt the teacher to pose guiding questions to the students in the debrief section to reinforce their comprehension of new vocabulary.

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

- The margin notes in the lessons provide suggestions to help students who may struggle with vocabulary terms. For instance, in Module 4, Lesson 8, the teacher is prompted to create a chart with drawings and examples for greater and less. The module overview includes terminology for the lessons. The list of terminology includes both new and familiar terms.
- In Module 3, the teacher is guided by the topic overview to expand students' vocabulary using sentence frames for speaking and listening. In Module 6, Lesson 13, the teacher is provided with guidance and opportunities in the concept development notes for students to listen, read, speak, and write new academic vocabulary using sentence frames.

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.

- During Module 2, Lesson 6 in the Concept Development section, students practice academic vocabulary and solidify their understanding by turning to each other and discussing the make ten strategy with one another. In Module 1, Lesson 2, the teacher instructs students to discuss with their partners whether they used the count-on strategy or not. During the student debrief, students engage in conversation with their partners, facilitated by the teacher.
- In Module 5, Lesson 14, the materials guide the introduction of the term half past while learning to tell time. Questions are provided for the teacher to help them define the term in context. The materials prompt students to share their understanding with a neighbor. During Module 5, Lesson 1, Student Debrief, students are asked to define an attribute and explain its meaning to their peers.
- The students use academic language to apply solving strategies and share their understanding with a partner, as guided by the questions in Module 3, Lesson 7, Student Debrief. Students share their thinking about the shapes they used in Module 5, Lesson 9, with their partners. This discussion enables them to use academic language to describe the shapes and the new objects they created.

- In Module 4, Lesson 4, students are guided to turn and talk to their peers and hear different ways of thinking. In Module 6, Lesson 27, students are guided to work in small groups and practice new vocabulary.

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

Process standards are integrated appropriately into the materials.

- The *OER K–5 Math Program and Implementation Guide* includes a summary of how the TEKS (Texas Essential Knowledge and Skills) Mathematical Process Standards are embedded in each lesson. The K–5 Math Program and Implementation Guide states they are "seamlessly woven into the lesson structure." The K–5 Math Program and Implementation Guide provides a bulleted list of some examples of how the "TEKS Mathematical Process Standards" live in these materials.
- The *Grade 1 Course Guide* provides a table listing the TEKS Mathematical Process Standards and where they are addressed in each module. It also includes a scope and sequence specifying the TEKS Mathematical Process Standards for each module.

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

- The "TEKS Mathematical Process Standards" section of the *OER K–5 Math Program and Implementation Guide* provides teacher guidance on how the process standards are integrated into the lesson structure throughout the course. It states that "They are seamlessly woven into the lesson structure to require the level of thinking and behaviors that the standards embody." The *Grade 1 Course Guide* outlines the TEKS Mathematical Process Standards (TEKS MPS) in various ways. The first is when they list each TEKS MPS in the Scope and Sequence to portray how they are incorporated and connected from one module to the other. Within the Knowledge and Skills columns in the Scope and Sequence, several of the

items in the list cover the TEKS MPS. There is also a table that outlines where TEKS MPS are taught within the course, which also shows how they are incorporated and consistent throughout the course.

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

- The TEKS Mathematical Process Standards (TEKS MPS) are incorporated throughout the unit as shown in the Scope and Sequence section of the *Grade 1 Course Guide*. Each module has TEKS MPS incorporated. There is also a fluency activity called "Say Ten Conversion" that highlights the incorporation of TEKS MPS, as highlighted in Grade 1, Module 2, Lesson 2. 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 Grade 1, Module 1.
- 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 will 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, "Throughout module 1, students engage with the TEKS mathematical process standards by creating and using representations to organize, record, and communicate mathematical ideas (1.1E)."

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

- The *OER K–5 Math Program and Implementation Guide* outlines the cohesive integration of TEKS Mathematical Process Standards within each lesson, describing this integration as seamlessly woven into the lesson structure. Additionally, the *OER K–5 Math Program and Implementation Guide* presents a table that summarizes the incorporation of TEKS Mathematical Process Standards across all lessons.
- The course materials include a detailed table outlining the TEKS Mathematical Process Standards that should be integrated into each module. The *K–5 Math Program and Implementation Guide* provides a comprehensive scope and sequence, outlining the TEKS Mathematical Process Standards for every lesson and module. Additionally, the Grade 1 Course Guide features a table that specifies the TEKS Mathematical Process Standards to be addressed in each 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 think mathematically. For example, Module 5, Lesson 11, "Concept Development," prompts students to think mathematically when analyzing partitioned pizzas and determining the fairness of the share. Prompts also invite students to share ideas on how to partition different shapes of pizza into equal shares. Module 4, Lesson 8, "Application Problem," provides a task for students to recognize the importance of the value of a unit by comparing the value of four dimes and four pennies. In Module 3, Lesson 1, Concept Development, questions prompt students to reason about appropriate tools to measure ribbons for a gift box and distances across the classroom.
- The materials provide opportunities for students to persevere through problem-solving. For example, Module 3, Lesson 5, "Application Problem," provides a task for students to apply their understanding of measurement within the context of a real-world example in a word problem. The scenario states, "When Corey measures his new pencil, he uses 19 centimeter cubes. After he sharpens the pencil, he needs 4 fewer centimeter cubes. How long is Corey's pencil after he sharpens it?" Module 3, Lesson 4, Concept Development, includes an activity for measuring a marker and crayon using centimeter cubes. The materials prompt the teacher to ask guiding questions such as "How many more cubes did you need to use to measure the marker compared to the crayon?" and "How did you know? Talk with your partner about your thinking. Think about the number sentence that would match what you did."
- The materials provide opportunities for students to make sense of mathematics. For example, Module 4, Lesson 11, "Problem Set," prompts students to show the magnitude of numbers as they place numbers on number lines. Module 5, Lesson 3, Problem Set, prompts students to draw two more shapes to match two shapes already within the box and describe their attributes. Module 4, Lesson 19, Problem Set, prompts students to use the complete strip

diagram to create word problems with a word bank of topics and actions. The directions state, "Use the strip diagrams to write a variety of word problems. Use the word bank if needed. Remember to label your model after you write the story."

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 there can be multiple ways to solve problems and complete tasks. For example, Module 1, Lesson 10, "Student Debrief," prompts students to compare the ways they solved the application problem, including a discussion of efficiency. Module 4, Lesson 4, Student Debrief, includes questions to support students' discussion about the strategies they used to solve problems. The Problem Set in Module 2, Lesson 11 provides students the opportunity to represent a problem in more than one way. Module 6, Lesson 7, Concept Development, guides students to use 10 sticks and loose linking cubes to model numbers and support writing multiple representations of the number, including expanded form and standard form. The materials also include using "Hide Zero" cards.
- The materials support students in explaining that there can be multiple ways to solve problems and complete tasks. For example, Module 6, Lesson 12 prompts students to explain their mathematical approach using place value to identify numbers larger or smaller than a given number. The guidance states, "Look at Problem 1. Which numbers were simplest to put in order from least to greatest? Which numbers were trickiest to put in order? What tips would you give a friend trying to order numbers?"
- Materials support students in justifying that there can be multiple ways to solve problems and complete tasks. Module 4, Lesson 15, Concept Development, directs students to use linking cubes and quick ten drawings to add. Materials also include number bonds to decompose a number by tens and ones in a horizontal number sentence to demonstrate different grouping strategies when adding. In the Student Debrief, a prompt for students states, "Today, how did you decide whether to add the ones to the ones or to make a new ten?" This prompts students to justify their responses.

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

- The materials require students to make sense of mathematics through discussing math with their peers and with the teacher. For example, Module 1, Lesson 25, Concept Development, provides students with discussion opportunities with their peers and with the teacher as they solve addition problem situations. The teacher vignette provides the prompt, "How many more bears came to play? Turn and talk to a partner to share a strategy you used." Module 4, Lesson 7, Concept Development, provides teacher guidance to "Have students work in pairs using linking cubes or working in groups of four using magic counting sticks to make all combinations of tens and ones to make 13, 23, 27, 34, and 38." Module 5, Lesson 13, Student Debrief, prompts students with questions to discuss time on a clock from their problem set with their partner and teacher.

- The materials support students' sense-making through doing math. For example, Module 1, Lesson 38, Application Problem, provides an opportunity for students to work on a *comparison* problem. Module 1, Lesson 11, Application Problem, prompts students to draw and write a number sentence and use a sentence stem to discuss what is happening in the problem. Module 2, Lesson 11, Application Problem, prompts students to compare the quantity of green and red apples purchased. The problem states, "Nicholas bought 9 green apples and 7 red apples. Sofia bought 10 red apples and 6 green apples. Sofia thinks she has more apples than Nicholas. Is she right? Choose a strategy you have learned to show your work. Then, write number sentences to show how many apples Nicholas and Sofia each have." Module 6, Lesson 6, Concept Development, provides teacher guidance to ask students to represent numbers as groups of tens and ones on a place value chart and drawings.
- The materials support students' sense-making through writing about math. For example, in Module 5, Lesson 2, Problem Set, instructions prompt students to explain in writing why they think a shape is or is not a rectangle. Application Problems provide an opportunity for students to record an answer statement. For example, Module 2, Lesson 12, Application Problem, provides an exemplar answer statement that states, "Claudia has 17 apples altogether." Writing is the third step in the material's problem-solving strategy, Read-Draw-Write.

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.

- The materials support the teacher in guiding students to explain their problem-solving approaches. In Module 4, Lesson 17, "Student Debrief," the guidance prompts teachers to ask, "How did you solve this problem? What did you draw first?" For example, Module 4, Lesson 4, Student Debrief provides a question to ask students to share the strategy they used to solve the problem with the question, "How can solving problem 1 help you solve problem 2?" Module 4, Lesson 19, Student Debrief, provides the question, "How could knowing the answer to one story problem help you with a different story problem?" This question guides students to explain how they would solve this problem and how it can help them with another problem like this one in the future. Module 3, Lesson 11, Student Debrief, includes questions to guide students in explanations comparing bar graphs to picture graphs. For example, a question asks, "How is using the counting on strategy related to using a subtraction sentence when comparing how many more or fewer votes one category received than another?"
- Materials support teachers in guiding students to share and reflect on their problem-solving approaches, including arguments and justifications. For example, in Module 6, Lesson 29, "Concept Development" supports the teacher in guiding students to explain the reasonableness of their solutions to a partner. Guidance in the vignette note states, "After students have explained their strip diagram and solution accurately, point to sections of the strip diagram, and ask the class questions such as, 'What does this part represent? How do you know?'" The materials support teachers in guiding students to share and reflect on their problem-solving approach, which includes explanations. For example, Module 2, Lesson 11, "Application Problem," includes teacher support to prompt students to explain how their drawing matches the number sentence. Module 2, Lesson 8, Student Debrief, supports the teacher in guiding students to reflect on their problem-solving approaches. This guidance includes providing explanations, making arguments, and offering justifications.

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

- The materials provide prompts and guidance for teachers related to anticipated misconceptions at the beginning of each module in the "Collaboratively Troubleshooting Student Misconceptions" section. The table in the section includes the Topic, TEKS, Student Misconceptions, and How to Bridge for a Better Understanding. For example, in Module 2, the anticipated misconception for Topic A is that adding numbers in order is the best way. The teacher guidance is to use manipulatives to model and encourage the use of the make-ten strategy. For the Topic C misconceptions, four teacher prompt examples are given. The recommended bridge for students counting all is to use a Rekenrek as a visual for students to see each number and make the connection to 10 and some left over when counting the teen numbers. In Module 6, Topic B, students might be confused with numbers in the tens place. The misconception guidance suggests using linking cubes to show adding or subtracting 10 and bundling tens into hundreds. The use of a place value chart can support determining 10 more or 10 less.
- 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 D, 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.
- Materials offer guidance for teachers to provide explanatory feedback based on student responses. For example, in Module 2, Lesson 12, "Notes on Multiple Means of Expression," the margin note states, "At this time, students may be working at varying stages of subtracting, as depicted in the image below. While praising students for accurate solutions, encourage them to move to the next level strategy. If they are counting all, they should be encouraged to make the connection to counting on. If students are counting on, they should be encouraged toward taking from ten." The images included for the various strategies provide guidance for teachers to support their students' movement to the next level strategy.
- The *OER K–5 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 *OER K–5 Math Program and Implementation Guide* suggests using the *Course Guide* specific to the course of instruction.