IMRA Review Cycle 2024 Report

Publisher Name	Program Name
Accelerate Learning	*STEMscopes Texas Math*

Subject	Grade Level
Mathematics	3

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

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

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

IMRA Reviewers

Flags for Suitability Noncompliance **0**

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

Flags for Suitability Compliance **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 **3**

Public Feedback

Flags for Suitability Noncompliance **0**

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

Alleged Factual Errors **0**

Public Comments **0**

Quality Review Summary

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

Strengths

- 1.1 Course-Level Design: Materials include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course, with suggested pacing guides for various instructional calendars, explanations for the rationale of unit order and concept connections, guidance for unit and lesson internalization, and resources to support administrators and instructional coaches in implementing the materials as designed.
- 1.2 Unit-Level Design: Materials include comprehensive unit overviews that provide background content knowledge and academic vocabulary necessary for effective teaching, and contain supports for families in both Spanish and English with suggestions for supporting their student's progress.
- 1.3 Lesson-Level Design: Materials include comprehensive, structured lesson plans with daily objectives, questions, tasks, materials, and instructional assessments required to meet the content and language standards. They also provide a lesson overview outlining the suggested timing for each component, a list of necessary teacher and student materials, and guidance on the effective use of lesson materials for extended practice, such as homework, extension, and enrichment.
- 2.1 Instructional Assessments: Materials include a variety of instructional assessments at the unit and lesson levels, including diagnostic, formative, and summative assessments with varied tasks and questions, along with definitions and purposes, teacher guidance for consistent administration, alignment to TEKS and objectives, and standards-aligned items at different levels of complexity.
- 2.2 Data Analysis and Progress Monitoring: Materials include instructional assessments and scoring information that provide guidance for interpreting and responding to student performance, offer guidance on using tasks and activities to address student performance trends, and include tools for students to track their own progress and growth.

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

explicitly state how the conceptual and procedural emphasis of the TEKS are addressed, include questions and tasks that use concrete models, pictorial representations, and abstract representations, and provide supports for students in connecting and explaining these models to abstract concepts.

- 5.4 Development of Academic Mathematical Language: Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, and language strategies, with embedded teacher guidance on scaffolding vocabulary, syntax, and discourse, and supporting mathematical conversations to refine and use math language.
- 5.5 Process Standards Connections: Materials integrate process standards appropriately, providing descriptions of how they are incorporated and connected throughout the course, within each unit, and in each lesson.
- 6.1 Student Self-Efficacy: Materials provide opportunities for students to think mathematically, persevere through problem-solving, and make sense of mathematics, while supporting them in understanding multiple ways to solve problems and requiring them to engage with math through doing, writing, and discussion.
- 6.2 Facilitating Productive Struggle: Materials support teachers in guiding students to share and reflect on their problem-solving approaches, offering prompts and guidance for providing explanatory feedback based on student responses and anticipated misconceptions.

Challenges

- No challenges in this material

Summary

Accelerate Learning's *STEMscopes Texas Math* is a Mathematics K–5 program. The materials promote conceptual understanding of mathematics through hands-on exploration, inquiry, and analysis using the research-based 5E + IA model (Engage, Explain, Elaborate, Evaluate, Intervention, and Acceleration). It offers vertically aligned instructional materials that cover all TEKS and ELPS. The materials support students by building concrete understanding before transitioning to representational models and abstract representations. *STEMscopes Texas Math* provides frequent opportunities for students to deepen their learning through discourse and writing. Additionally, the program includes materials and resources accessible through the online platform and available in both English and Spanish.

Campus and district instructional leaders should consider the following:

- The materials include teacher guidance and resources that support all learners, including emergent bilingual students, students with disabilities, and gifted and talented students. Instructional and Language Supports are embedded within each Explore. Resources for remediation and extension are included for each scope. Teacher guidance for these resources is included in the Teacher Guide.

- The program is a comprehensive program that includes a scope and sequence, planning resources, teacher guidance, assessments, and an extensive selection of instructional materials. Teachers would benefit from training on the components included in the program and navigating the online platform.

Intentional Instructional Design

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

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

Evidence includes, but is not limited to:

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

- Materials for grade 3 include a scope and sequence document within the "Teacher Toolbox" tab under the "Curriculum Design" link. The scope and sequence outline the Texas Essential Knowledge and Skills (TEKS), English Language Proficiency Standards (ELPS), concepts, and knowledge taught in the course.
- The scope and sequence organize information in five columns: Scope Name, TEKS Covered, Explores, Included Standards, and Total Instructional Days. The Explores column outlines the concepts and knowledge taught in the course. For example, the "Multiplication Strategies and Algorithms" scope lists the Explores: "Explore 1 - Commutative and Associative Properties," "Explore 2 - Arrays," "Explore 3 - Area Models and the Distributive Property," and "Explore 4 - Algorithms." The Included Standards column outlines the process standards and ELPS for each Explore.

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

- The materials include an *Implementation Guide* under the "Curriculum Design" link within the "Teacher Toolbox" tab. The *Implementation Guide* provides educators guidance on using the materials in various calendar settings including 165 days, 180 days, and more than 180 days.
- The "Scope and Sequence" documents align to a 180-day calendar and 90-minute math block. The *Implementation Guide* suggests adding or removing certain activities to support effective implementation in various calendar settings. One suggestion for pacing with a 165-day calendar states, "Only teach using the essential activities that are highlighted on our lesson Planning Guides in the "Teacher Toolbox." If time is limited, teach only these activities to fully cover the standards." Guidance for a calendar over 180 days states, "Utilize the Intervention and Acceleration elements to help strengthen the content understanding."
- Within each scope's toolbar "Home" tab, a "Suggested Scope Calendar" outlines the pacing of each day's learning engagements with time stamps. The details for daily pacing support the effective implementation of the material. For example, day 1 of the scope "Division Models" provides an outline of activities for warm-up, whole-group, small-group, and assessment.

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

- The materials include a grade 3 "Course Rationale" under the "Curriculum Design" within the "Teacher Toolbox" tab. The course rationale identifies four areas of focus to provide insight into the major mathematical topics throughout the course. These areas of focus support the progression within and across the mathematical strands and emphasize the connections between major mathematical topics. The four areas of focus for grade 3 are place value and properties of operations, whole number operations, fractions, and geometry.
- The grade 3 "Course Rationale" document includes a table that displays the areas of focus and connected TEKS for each scope. For example, the table indicates the areas of focus for the scope "Multiplication and Division Problem Solving" as place value and properties of operations, whole number operations, and geometry. The connecting TEKS for the scope are 3.4D, 3.4E, 3.4H, and 3.4J.
- The materials include an *Implementation Guide* under the "Curriculum Design" within the "Teacher Toolbox." The *Implementation Guide* lists key features of *STEMscopes*. The "Planning Guidance" feature states, "While the natural progression of mathematics was used to determine the order and pace, our scopes are designed to be flexible and used in any order." No explanations were specifically provided for the flexible ordering of the units.

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

- "Lesson Planning Resources" under the "Essentials" tab in the "Teacher Toolbox" include "Planning Guides." Planning Guides support the teacher in creating lesson plans for either whole-group or small-group instructional models. Planning guides support the educator with

daily lesson internalization by highlighting the essential elements that provide full coverage of the standards and guide the selection of daily activities from the scope.
- Materials for each scope include a *Teacher Guide* within the "Print Files" in the "Scope Overview." This resource leads teachers "through each scope's fundamental activities while providing facilitation tips, guidance, reminders, and a place to record notes on the various elements within the scope."

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

- The *Implementation Guide* in the "Teacher Toolbox," "Administration and Instructional Coaches" section, provides general guidance for grades 3–5 components such as scope and sequence, suggested scope calendars, planning guides, and teacher preparation and planning guidance.
- The *Implementation Guide* includes guidance on foundational teacher actions which describes STEMscopes' "Guiding Principles of Best Practice." Within this information, a table outlines examples of teacher and student actions in the context of hands, ears, mouth, and mind, as well as examples of what an observer might notice.
- Administrators and instructional coaches have access to a scope titled "How to Use STEMscopes Texas Math." This scope includes a compilation of videos explaining how to use the various components of the STEMscopes Texas Math program. Its structure mirrors that of the content scopes.
- The "Suggested Scope Calendar" includes guidance to support administrators and instructional coaches with implementing the materials as designed. The grade 3 "Compare and Order Numbers" scope's Suggested Scope Calendar lists objectives by day. For example, the day 4 objective states "Students order whole numbers up to 100,000 from least to greatest and from greatest to least."
- The "Observation Checklist" outlines lesson implementation for administrators to use when observing teachers implementing the materials as designed or implementing the materials with fidelity. The checklist includes a template with a section titled "Notes and Feedback," which allows administrators and instructional coaches to document observation notes.

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**

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

Evidence includes, but is not limited to:

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

- The materials in grade 3 include a content support link under the "Home" tab for each scope. The content support document provides a variety of information for the educator to effectively teach the concepts in the unit, including background knowledge and academic vocabulary. For example, the "Addition and Subtraction Strategies" scope states "Second grade students also compare quantities to 1,200. In addition, they learn to add and subtract whole numbers within 1,000. They can recall both addition and subtraction facts through 20 with automaticity." The vocabulary for the same scope includes terms such as associative property of addition and compatible numbers.
- Each scope includes a "Content Unwrapped" section within the Home tab. This section provides background content knowledge in a variety of ways. First, it includes a dissection of the TEKS where it pulls apart the language in the TEKS to identify each breakout that is a part of the student expectation. In addition, implications for the instruction portion link prior knowledge to the current learning. An example in the "Equivalent Fractions" scope states "Students have had experiences with partitioning shapes into halves, fourths, and eighths. Thirds are new to students in this grade. In addition, equivalent fractions are a new concept to students in this grade." A vertical alignment table outlines where grade 3 knowledge fits in the progression of grades 2–6. The Content Unwrapped section also notes common misconceptions. For the aforementioned scope, it states "Students often forget that fractions must refer to the same-size whole in order to be considered equivalent. Two-fourths does not equal one-half if the wholes are different sizes."

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

- Materials contain an English and a Spanish version of a "Take-Home Letter" on the home page for each scope. The Take-Home Letter goes home in advance and provides a breakdown of the concepts for each scope. The letter explains the content of the scope and the vocabulary in simplified terms. It includes suggestions on how to help at home and some example problems with solutions. Letters for some scopes include additional resources.

Intentional Instructional Design

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

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

Evidence includes, but is not limited to:

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

- Within the "Home" tab of each scope, the "Scope Overview" section includes a comprehensive and structured teacher guide that provides content objectives, questions, tasks, materials, and instructional assessments. This printable planning tool provides a space for teachers to schedule the activities of the scope. The "Engage and Explore" activities provide a daily content objective. For example, within the "Area" scope, Explore 1 states "In this activity, students recognize a unit length and practice tiling area using square units." The teacher guide lists the materials and preparation each activity requires. The procedure and facilitation section of the tool supports the teacher by listing detailed student and teacher actions as well as questions at different depths of knowledge to engage students in discussion. The "Assessment Planner" within the teacher guide includes a template to plan for assessments using fundamental questions and assessment resources available in the scope while referencing the student learning objectives.
- The Home section of each scope includes a "Suggested Scope Calendar." Suggested Scope Calendars serve as sample lesson plans that guide teachers through scopes. They include daily content objectives, warm-up options, whole group and small group tasks, and linked assessment options with detailed directions. For example, in grade 3, the scope "Addition and

Subtraction Strategies" suggests an assessment for day 3, titled "Show What You Know-Part 1: Estimation and Rounding," and provides the description, "Students apply the knowledge and skills learned during the Explore using this practice." This section provides teacher guidance for the preparation process and lists procedure and facilitation points for the implementation of the assessment. The answer key supports the teacher in understanding the correct responses.

- Each "Explore" activity provides a "Language Support" section at the bottom of the facilitation guidance. This structure is consistent throughout the Explores in the materials. Teachers use the list of ELPS provided in each Explore to write their own daily language objectives based on the language needs of the students in their classroom. For example, the bottom of the Language Supports box of Explore 2 in the Area scope states "The following English Language Proficiency Standards are supported: 1.AEFGH, 2.CDEGHI, 3.BCDEFGH, 5.BDEFG." Questions and tasks within the Language Supports align with the standards. For example, the teacher guidance states, "Actively monitor group work to make sure multilingual learners have an opportunity to speak and use the academic vocabulary." The materials provide sentence stems to support academic vocabulary when speaking.

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

- The Home section of each scope includes a Suggested Scope Calendar. The Suggested Scope Calendar includes time stamps for the day's lesson components. For example, the scope "Addition and Subtraction Strategies" include Day 1 time stamps for warm-up options (5–10 minutes), whole group (<15 minutes), small group (30–45 minutes), and assessment options (<15 minutes). Day 2, the time stamps shift instructional minutes within the lesson components, and the whole group minute allotment expands to 45–60 minutes while small group minutes decrease to 15–30 minutes.

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

- Each scope activity includes teacher directions under each tab within the scope. The teacher directions describe the materials needed for the activity and the preparation required beforehand. For example, the scope "Represent and Interpret Fractions Explore 1" teacher directions include a lesson overview with teacher and student materials necessary to effectively deliver the lesson. For example, printed materials include student journals, scenario cards, and exit tickets. Reusable (manipulative) resources include linking cubes, colored tiles, fraction circles, resealable bags, and paper plates.

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

- Materials include an "Acceleration" tab on each scope's main section. The acceleration tab contains student exploration activities, create your own (open-ended task), and choice boards. For example, the scope of "Represent Numerical Relationships" includes a "Choice Board" for enrichment within the Acceleration tab of the white toolbar. The Choice Board teacher guidance provides a description, materials, preparation, procedure, and facilitation points for effective implementation. The description of the activity states "Students explore real-world connections and applications of math content through interactions with engaging activities."
- Materials include a "Take-Home Letter" in each scope's home section. The Take-Home Letter explains new upcoming materials and ways to enrich the learning at home by including a "Tic-Tac-Toe: Try This at Home" choice board.
- The Home section of each scope includes a Scaffolded Instruction Guide. The guide includes several virtual components to utilized for extended practice. Assigned as homework, the virtual learning options support students working at different proficiencies. For example, in the scope of "Represent Numerical Relationships" students practice prior grade-level skills by accessing the "Representing Numerical Relationships" activity from home.

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. Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments. Diagnostic, formative, and summative assessments 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.

- Materials in grade 3 include a variety of assessments within each lesson. For example, within the "Multiplication Models" scope, the "Accessing Prior Knowledge" diagnostic assessment titled "Multiplication Models" includes "A brief probing activity to gauge students' prior knowledge before engaging in the content of the scope." Students decide which of four students used the correct number sentence to describe the picture provided. Within the same scope, the "Show What You Know-Part 1: Equal Groups and Repeated Addition" formative assessment describes different scenarios for students to solve using three different strategies: a model, repeated addition, and a multiplication equation. Within the "Elaborate" tab of the scope, the "Problem-Based Task," "Zoo Caps," allows students to work collaboratively to apply their learning to an open-ended, real-world challenge.
- Materials within the "Evaluate" tab of each scope include multiple assessments utilizing a variety of tasks and question types. For example, in grade 3, the scope Multiplication Models include a formative assessment, "Decide and Defend." The assessment requires students to read a scenario and decide which two girls will earn the most money selling cupcakes. Students determine their answers and justify their thinking using the space provided. Each

scope includes a summative standards-based assessment with word problems and multiple-choice questions. Scopes also include an observation checklist. For example, the "Compare and Order Numbers" scope includes sections for teachers to take observational notes on comparing and ordering whole numbers. The checklist in this scope is a resource for a formative assessment of key mathematical behaviors (i.e., modeling, drawing, discussion, and writing). It also provides a space for teachers to take notes and plan feedback. A student-facing checklist option supports students' self-evaluation of their understanding using the measures "I've got it, almost there, and not yet."
- Each scope includes a "Suggested Scope Calendar" that lists all assessments within the scope and labels them as D = Diagnostic, F = Formative, or S = Summative.

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

- The *Teacher Toolbox Implementation Guide*, within the "Essentials Curriculum Design" section, includes definitions for each instructional assessment. The materials include a description of 15 assessments in all. The definition for "Accessing Prior Knowledge" at the beginning of each scope states "A brief probing activity to gauge students' prior knowledge before engaging in the content of the scope." The definition of "Skills Quiz" states "A standards-based assessment to determine the student's ability to solve mathematical problems efficiently and accurately." The definition for "Decide and Defend" states "An open-ended assessment that prompts students to reason mathematically and support their ideas with evidence."
- Materials provide the definition and purpose for each of the three benchmark assessments located under the "Benchmark Assessment" link on the left-hand side of the main scope page. The materials state "Each assessment provides meaningful data that can be used to inform instruction in the classroom. The intent of the pre-assessment is to evaluate students on standards they have already learned. The mid-assessment will assess a mixture of grade-level and previous grade-level standards. The post-assessment will evaluate all grade-level standards and can be used as a predictor of student performance on state tests."
- A Suggested Scope Calendar for each scope includes diagnostic, formative, and summative assessments at the unit and lesson level. The material defines each assessment type and designates it as diagnostic, formative, or summative.

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

- Within the Multiplication Models scope, the Decide and Defend assessment guides teachers through the administration of the assessment. The guidance includes a description of the assessment, a materials and preparation section, and procedure and facilitation points. The "Tips and Tricks" section offers teachers additional implementation options such as, "This element can be used as a whole-class discussion in which students pick a side and justify their decisions."

- Within the Multiplication Models scope, the Skills Quiz includes assessment administration guidance. The guidance includes a description of the assessment, a materials and preparation section, and procedure and facilitation points. The Tips and Tricks section at the end of the page offers teachers additional implementation options such as, "This element can be used as an assessment for learning and can be assigned to students to complete independently at their seats or as part of a workstation."

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

- Materials include a "Heat Map" for each skills quiz and standards-based assessment within the scopes and for the benchmark pre-, mid-, and post-assessments. The heat maps indicate how each question aligns with the TEKS and scope objectives. For example, the Multiplication Model skills quiz heat map lists questions 1, 4, 6, and 15 that correlate to TEKS 3.4D. The post-assessment benchmark heat map indicates the assessment aligns with 23 grade 3 standards. For example, questions 29 and 30 align to 3.8A. Question 29 requires students to represent the data within the bar graph in a data table. Question 30 requires students to represent data from a frequency table in a dot plot. Both questions require students to summarize a data set with multiple categories using appropriate grade-level graphs.
- Within the "Compare Fractions" scope, Explore 1 includes an exit ticket for students to complete that provides the teacher data on student understanding. The exit ticket requires students to create a model, plot on a number line, and record a statement with the comparison of two fractions. TEKS 3.3H states "Compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models," and therefore, as formative assessment, aligns with the grade level TEKS.

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

- Materials include assessments that align with standards. For example, "Technology-Enhanced Questions is an assessment designed to allow students to answer question types that are not possible in a paper/pencil format. These computer-based questions use formats that allow for non-conventional question types, including multiple answer, sequence, Griddable, fill-in-the-blank, sorting, and bar graph." These assessments are located within the Evaluate tab for each scope and are assigned for students to complete within the platform.
- The standards-based assessments found within the Evaluate tab for each scope provide an opportunity for students to answer multiple-choice questions at different depths of knowledge (DOK). For example, the standards-based assessment answer key within the "Addition and Subtraction Problem Solving" scope indicates eight questions at DOK level 2 and two questions at DOK level 1. These questions show that the questions vary in level of complexity within the assessment.

- The observation checklists in the Evaluate tab for each scope may be used by the teacher or student. Students have the opportunity to demonstrate their understanding of the skill or concept being assessed in a variety of ways, including drawing, modeling, and applying.

Progress Monitoring

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

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

Evidence includes, but is not limited to:

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

- The *Implementation Guide* states "Our Growth Measurement Assessments are written and aligned by MetaMetrics Inc. and include kindergarten through Algebra I. They track the growth of on-grade level standards from the beginning of the year to the end of the year and report a Quantile® measure in their score reporting." Additionally, the "Quantile" information menu within the "Teacher Toolbox" provides ample information about the use of quantiles to identify what the student is ready to learn and target instruction at the appropriate level to foster student growth.
- When students take assessments through the STEMscopes online platform, teachers can view the data generated from the "Students" menu. The reports provide analytics for each student.
- The Scaffolded Instruction Guide provides guidance for interpreting and responding to student performance assessments provided in the scopes as well as MAP growth assessment data. The guide supports the interpretation of results by defining student performance levels using four percentile ranges. For example, the guide states students performing within the 0–25 percentile range need support from previous grade-level content, students performing within the 25–50 percentile range need support from grade-level intervention, students performing within the 50–80 percentile can work on grade-level content, and those performing in the 80–100 percentile range are ready to apply their knowledge to a variety of activities. The guide supports teachers' responses to student assessment performance by providing links to suggested instructional materials organized by standard and percentile performance range.

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

- The "Accessing Prior Knowledge" activity within the "Engage" section of each scope provides an opportunity for educators to gather data regarding student understanding of prior grade-level topics. The *Teacher Guide* states, "If your students are struggling with previously taught concepts, use the Foundation Builder activity in this scope to reinforce ideas presented in the Accessing Prior Knowledge." The "Foundation Builder" provides teachers with a specific activity targeting knowledge from prior grade levels to respond to data and prepare students for engagement in grade-level learning.
- Materials include instructional strategies for small group intervention to support students who demonstrate a need for more support. Teachers access this guide under the "Intervention" tab on each scope's home page. The intervention includes a list of materials and any preparation required. Procedure and facilitation points include a step-by-step guide for teachers to follow along with questions to ask and possible student responses.
- The "Suggested Scope Calendar," under the "Home" tab of each scope's home page, guides teachers to appropriate activities based on student assessment results. For example, in the "Division Models" scope, the Suggested Scope Calendar suggests the "Acceleration-Math Today" (15–30 minutes) practice activity for students who score Masters. Students who score at the Meets level participate in the "Elaborate-Math Story" practice activity (30–45 minutes), and students who score at Approaches participate in the "Elaborate-Interactive Practice" activity (15–30 minutes). "Intervention-Small-Group Intervention" activities (15–30 minutes) serve as additional guided practice opportunities.

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

- Students track their growth and progress using the observation checklist found within the Evaluate tab of each scope. For example, in the "Addition and Subtraction Problem Solving" scope, the first of four columns titled "Standard" lists the standard as 3.4B. The "Skill or Key Concept" column states "I can round to the nearest 10 or 100 or use compatible numbers to estimate solutions to addition and subtraction problems." The next column titled "How could you show you know this?" lists five different strategies students can utilize. The last column, titled "How would you rate yourself?", shows pictures of hands with a thumb up, a thumb pointing sideways, and a thumb pointing down. Students color or circle the hand that matches their level of understanding.
- Each scope provides "Heat Maps" for the skills quizzes and standards-based assessments. Students use heat maps to "analyze their assessment results and determine what they did well and where they can improve." Students use red and green crayons and the student handout to shade their proficiency on questions aligning with specific standards. In addition, a reflection section provides the opportunity to reflect on strengths and growth areas from their performance.

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

Evidence includes, but is not limited to:

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

- The practice section of the "Suggested Scope Calendar" in the "Home" tab within each scope includes recommendations for differentiated activities for students at the Masters, Meets, and Approaches proficiency levels. For example, the grade 3 "Compare and Order Numbers" scope suggests an "Interactive Practice" task for students at the Approaches level.
- The materials provide questions to guide students' thinking within the lesson. For example, within the "Small Group Intervention" activity in the "Intervention" tab in the grade 3 "Multiplication Models" scope, the "Procedure and Facilitation Points" step number 9 asks students to read aloud the newly created scenario and guides the teacher to ask the following questions, "What information do you know? What do you need to find out?" Students work in pairs to create an equal group model to represent pots of plants using paper plates and counters. Step 13a states "Ask the following questions: How can the model help us figure out the product? What number is being repeated? What repeated addition sentence represents this problem?"
- Within the "Explore" section of select scopes, materials include paired activities to support students who have not yet reached proficiency on grade-level content. For example, the grade 3 "Time" scope includes the "Skill Basics- Represent Time on a Number Line" activity, which supports the skill development necessary to be proficient with grade 3 content. In this activity, after receiving a time work mat, students use a blank clock and an open number line to

calculate elapsed time in a variety of contexts before also finding the start or end time when provided with alternate times.

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

- "Picture Vocabulary," located under the "Explain" tab in each scope, aids in pre-teaching academic language using student-friendly definitions and images. For example, the grade 3 "Compare and Order Numbers" scope defines compare as "to determine similarities or differences between two or more objects or numbers." It uses a picture comparing two different fruits. Teachers access the vocabulary resource as a slideshow, flashcards, or student handout.
- The materials include embedded supports for pre-teaching vocabulary. The "Foundation Builder" under the "Engage" tab provides an early intervention activity to fill gaps before diving into new content. For example, in the grade 3 "Multiplication Models" scope, the Foundation Builder activity's last bullet states "The English language has many words that have multiple meanings. Suggested Solutions: To eliminate confusion, ensure students understand the following words." A table is provided listing the words *array, column,* and *row*, along with multiple definitions of the words. The last column in the table provides an example using the word in context. For example, the sentence for the word *array* states, "What is the total number of objects in your array?"
- The grade 3 "Compose and Decompose Fractions" scope provides an anchor chart within the "Explain" menu of the scope. The anchor chart supports students' academic language acquisition and reinforces newly learned content. It includes reference material for the entire scope. Teacher guidance supports making additions to the anchor chart as you go through each Explore of the scope.

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

- The "Represent and Interpret Data" scope includes a *Teacher Guide* within the Home menu "Scope Overview." The *Teacher Guide* provides specific facilitation tips that do not appear within the general activity guidance. For example, a "Facilitation Tip" within the "Accessing Prior Knowledge" to guide differentiation states "Invite students to create and volunteer to share their own question. Have the rest of the class respond with the appropriate signal." This instruction differentiates the activity for students who have demonstrated proficiency in grade-level content and skills and are ready for enrichment.
- Materials include options for enrichment as end-of-unit activities. Within the "Acceleration" tab in each scope, the "Create Your Own" activity requires students to brainstorm, plan, and create a new product based on the skills and concepts learned in the scope, igniting students' creativity. For example, within the grade 3 Multiplication Models scope, the Create Your Own activity provides students with the following scenario, "Mrs. Lingling's class is having a challenge to see how many arrays her students can find in the real world. You have been

selected to help Team A. Create a community map to help them find as many arrays as possible." Students brainstorm their ideas, list the necessary materials, sketch their map, and create a digital presentation of all the places they might see arrays.

- The "Scaffolded Instruction Guide" in the "Home" tab for the "Represent and Interpret Data" scope includes guidance in response to MAP data percentiles. The identification of activities to extend student understanding for students in the 80th to 100th percentiles list the following to support 3.8A: problem-based task, career connections, math today, math story, create your own, and choice board. The "Math Story-Patch Collecting" activity within the "Elaborate" menu allows students to read a passage and answer math and literacy questions related to the story.

Supports for All Learners

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

The materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly). Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches. Materials support multiple types of practice (e.g., guided, independent, collaborative) and include guidance for teachers and recommended structures (e.g., whole group, small group, individual) to support effective implementation.

Evidence includes, but is not limited to:

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

- The materials provide an "Anchor Chart" resource within the "Explain" tab of each scope. This resource includes step-by-step guidance for modeling concepts to be learned explicitly within each scope. For example, the "Multiplication Models" scope Anchor Chart directions prompt the teacher to prepare the chart by setting up two sections, "Equal Groups" and "Repeated Addition," and to gather markers for student participation. Step 2 directs the teacher to draw a model of circles with an equal number of objects in each circle on the anchor chart and ask the students a set of questions. The resource also provides prompts as well as possible student responses to explain and communicate the concepts explicitly. For example, Question b asks, "What do you notice about the number of objects in each circle?" and provides "There are equal numbers of objects in each circle" as a possible student response. The print files within this section include an example anchor chart.
- The "Compare Fractions Teacher Guide" within the "Scope Overview" of the "Home" menu provides prompts and guidance for modeling in the facilitation tips section. An example of guidance in "Accessing Prior Knowledge" states "Consider modeling this scenario using rectangular blocks of clay to represent the cake. Make different types of equal-sized cuts and have students observe that as the number of cuts increases, the size of the piece decreases."
- The grade 3 materials include "Procedure and Facilitation Points" for each "Explore." The Procedure and Facilitation Points provide prompts and guidance to explain and communicate the mathematical concepts included in the scope. For example, within the "Compare Fractions" scope, the specific guidance for "Explore 1-Compare Fraction Wholes" tells teachers to display a task card, invite a student discussion, and encourage participation.

Specific prompts for the teacher include, "a. What did you notice about the tacos? b. What might be the reason for the customer's complaints? c. You plan to share a taco equally with your friend and you are REALLY hungry. Which taco would you rather have half of? Explain."

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

- The materials include guidance for engaging students in higher discourse levels by providing students with opportunities to explain their thinking and understanding of mathematics. After the Explore activities, teachers invite the class to a "Math Chat" to share their observations and learning. Questions provided in the Math Chat sections of the *Teacher Guide* include questions of different depth of knowledge (DOK) levels to solicit a higher level of discourse. For example, the grade 3 "Multiplication Strategies and Algorithms" scope includes the following questions, DOK-2 "What did you notice as you solved each scenario using the different models?" and DOK-3 "Does the model used to solve a problem matter?"
- The "Represent Numerical Relationships" scope includes a variety of instructional approaches within the "Explain" menu of the scope. Each Explain includes teacher guidance and recommendations for effective lesson delivery and facilitation. The "Interactive Notebook" handout creates a reference for students to use during independent work and to record student learning. The teacher works on the examples with the students. Another way students explain their understanding of concepts is through the "My Math Thoughts" activity. This activity tells teachers to prepare by having various mathematical tools available. Students discuss their thinking with a partner and then write their thoughts from an initial math task. A third activity where students explain their concept knowledge is "Show What You Know." Each Show What You Know coincides with an Explore in the scope. Students engage with this task independently and access manipulatives as needed.
- The materials provide guided instructions for tasks that allow active participation, exploration, and discovery. For example, in the grade 3 "Count Money" scope, the *Teacher Guide* for "Explore 2" instructs the teacher to "Divide the class into pairs, and direct students' attention to the bag of coins and bills. Give each student a copy of the Student Journal. Allow students a few moments to discover the manipulatives and experience how they work, with their partners." Steps 3 and 4 provide directions to help students identify the coins and their values by creating a rubbing of each coin after reading menu items and the coins associated with each item.

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.

- In grade 3, the "Represent and Interpret Fractions" scope supports multiple types of practice and includes teacher guidance for effective implementation. The "Hook, Part II: Post-Explore" begins with a guided practice activity: "Place students in three groups. Distribute a bag of cookies and eight paper plates to each group." The teacher directs students to remove the

cookies from the bag, count them, and distribute them on paper plates. The teacher guides student groups through tool usage in a whole-group format. Within the same scope, teacher guidance for "Decide and Defend" within the "Evaluate" menu of the scope states "Decide whether you want students to work individually or in pairs." Teacher guidance suggests using the "Structured Conversation Routine" within the "Teacher Toolbox" to implement partnerships. Teacher guidance for the "Show What You Know" activities in the "Explain" tab that pairs with "Explores" indicates students work independently for the educator to determine the needs for intervention.

- Materials support multiple types of practice by providing clear headings identifying the recommended structure for activities within the lesson. For example, the "Suggested Scope Calendar," within the home tab of each scope, organizes the unit days using the same structure. Each day begins with a description of the day's objectives followed by the following categories respectively, Warm-Up Options, Whole Group, Small Group, and Assessment Options. Each section lists the available activities to select and the suggested allotted time for each.
- Within each scope under the "Elaborate" tab, materials include "Problem-Based Tasks." During these tasks, "Students work collaboratively to apply the knowledge and skills they have learned to an open-ended, real-world challenge." The directions for the teacher are "Allow students to work in groups. Encourage students to look back at their Student Journals from the Explore activities if they need to review the skills they have learned. If students are stuck, use guiding questions to help them think through it without telling them what steps to take next. If time permits, allow each group to share its solution with the class. Discuss how different groups tackled the challenge in different ways."

Supports for All Learners

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

The materials include teacher guidance on providing linguistic accommodations for various levels of language proficiency [as defined by the English Language Proficiency Standards (ELPS)], which are designed to engage students in using increasingly more academic language. Materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs. Materials include embedded guidance for teachers to support emergent bilingual students in developing academic vocabulary, increasing comprehension, building background knowledge, and making cross-linguistic connections through oral and written discourse. Materials include resources that outline opportunities to address metalinguistic transfer from English to the partner language.

Evidence includes, but is not limited to:

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

- The "Teacher Toolbox Linguistic Diversity" menu "Print Files" includes a table that provides teacher guidance to properly scaffold and provide linguistic accommodations based on various proficiency levels, including beginner, intermediate, and advanced. The resource categorizes each guidance by one of the four language domains (listening, speaking, reading, and writing), and the use of unique color-coding aids in both reading and understanding. Additionally, as demonstrated in the table, the use of more academic language over time is evident as proficiency increases within the "Speaking" section. For example, the beginner level shows students speak in familiar single words and short phrases, the intermediate level shows students use common vocabulary and simple sentences, and the advanced level shows students use complex grammar and abstract vocabulary. This table also supports

teachers by providing information about the next steps in scaffolding to grow student language proficiency levels by defining the student language behaviors at each level.

- Materials within the "Language Connections," under the "Explain" tab of each scope, include accommodations for students at the beginner, intermediate, and advanced levels of language proficiency. In the grade 3 "Multiplication Models" scope, the procedure and facilitation points guide the teacher to use gestures, pointing at objects, and visuals as appropriate, and use the provided prompts for listening, speaking, reading, and writing portions of the lesson. A table separates the four language domains (listening, speaking, reading, and writing) and lists strategies for each at the beginner, intermediate, and advance levels. For example, to facilitate discourse, the Speaking section includes the following differentiated sentence stems: for the beginner proficiency, "There are ___ groups of counters"; for intermediate proficiency, "First I made..." and "Then I placed..."; and for the advanced proficiency, "Models represent..." to explain how models and multiplication sentences relate.
- The materials include dedicated sections in the lesson plans for emergent bilingual students. For example, the grade 3 "Represent and Interpret Fractions" scope, "Explore 1-Parts of a Whole" lesson plan, includes a language support section guiding the teacher to explain the difference between the words *whole* and *hole*, ensuring the students understand the context of the word *whole* as it relates to fractions. Sentence stems support students in explaining their models, such as "These parts are called ____ because it takes ____ of them to make one whole."

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

- A "Linguistic Diversity" section within the "Teacher Toolbox" provides guidance to support teachers in using materials to serve linguistically diverse populations. For example, the "Resources and Tools" section lists a few features that support students at their proficiency level with a brief description of the activity and its intended purpose. Some activities include "Proficiency Levels by Domain, Working on Words, Sentence Stems/Frames, Integrated Accessibility Features, and Language Connections."
- Materials include support for teachers to use the materials in state-approved bilingual programs. For example, the "Spanish Translation and Transadaptation" section within the *Implementation Guide* in the Teacher Toolbox includes an explanation of their approach, which states "Our approach to developing the student-facing Spanish version of our product is not a simple direct translation. Using verbiage that aligns with the Math Spanish TEKS for the state of Texas, we have a team of translators, linguistic experts, and bilingual education specialists who work to provide transadapted Spanish materials that give Spanish-speaking students equal access to the content in our curriculum."

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

- Materials include embedded guidance for teachers to support emergent bilingual students by pre-teaching vocabulary within the "Foundation Builder," an early intervention activity meant to fill gaps before diving into new content. For example, within the "Engage" tab of grade 3 "Multiplication Models" scope, the Foundation Builder activity's last bullet states "The English language has many words that have multiple meanings. Suggested Solutions: To eliminate any confusion, ensure students understand the following words." A table lists the words *array, column,* and *row*, along with multiple definitions of the words. The last column in the table provides an example using the word in context. For example, the sentence for the word *array* states, "What is the total number of objects in your array?"
- Materials include embedded guidance to support connections to new skills, vocabulary, and concepts at each emergent bilingual student's proficiency level by providing opportunities for students to use their linguistic and cultural background knowledge during skills practice, including opportunities for written discourse. Under the "Explain tab," the "Language Connections" include differentiated student handouts for the various levels of language proficiency—beginner, intermediate, and advanced.
- The "Explores" include embedded guidance to support emergent bilingual students in building background knowledge. When working with math concepts in real-world contexts, the Explores provide opportunities to increase students' comprehension through prompts building connections to background knowledge. For example, Explore 1 within the Multiplication Models scope includes questions in the first step of the "Procedure and Facilitation Points." Step 1 states, "1. Help students access the task by asking the following guiding questions: a. Look around the classroom. What objects are in equal groups? b. What are other examples of objects arranged or packaged into equal groups? c. What do you already know about combining equal groups?" These questions provide an opportunity for students to engage in oral discourse applying academic vocabulary terms important to student success. During instruction, the teacher uses models and equations to represent multiplication. The teacher labels the parts of the equation and introduces the word *factor*. Pairing visual models with vocabulary words supports students' cross-linguistic connections when engaging in a class question and response discussion.

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 *Implementation Guide* within the "Essentials" menu's "Curriculum Design" section includes some guidance regarding Dual Language Immersion (DIL) Programs. For example, it states "Our products have visuals and suggested linguistic scaffolds for teachers to meet the needs of multilingual learners at all levels of proficiency. Our products and many of the accompanying resources are translated into Spanish and transadapted as appropriate. This provides dual language educators with the tools for side-by-side, cross-linguistic bridging and linguistic analysis opportunities between English and Spanish."

- The *Implementation Guide* includes a section outlining opportunities to address the program's implementation in a DLI program. For example, it states "Other elements, such as our Math Stories, were originally written in English and translated into Spanish. These stories provide another opportunity for educators in a dual language immersion program to look at explicit ways to plan language bridging with an additional lens of positive and negative transfer between grammar and phonics."
- Student-facing materials are available in both English and Spanish versions, which allows educators in DLI programs to provide opportunities for students to use their entire linguistic repertoire and plan for explicit language-bridging opportunities within the classroom. Specifically, the Picture Vocabulary, Interactive Vocabulary, and Anchor Chart elements help to lay the foundation for educators to look at positive language transfer not just of specific vocabulary but also morphological language patterns (such as prefixes and suffixes).

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 practice opportunities over the course of a lesson and/or unit (including instructional assessments) require students to demonstrate depth of understanding aligned to the TEKS. Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.

Evidence includes, but is not limited to:

Practice opportunities over the course of a lesson and/or unit (including instructional assessments) require students to demonstrate depth of understanding aligned to the TEKS.

- Practice within lessons requires students to demonstrate a depth of understanding aligned with the TEKS. For example, "Explore 3" within the "Addition and Subtraction Strategies" scope provides practice opportunities for adding numbers using a variety of strategies. The teacher guide includes prompts to inquire about place value strategy, number lines, and number decomposition. The cards for the activity include numerical values with different levels of sophistication for adding within 1,000. For example, adding 643 and 281 requires regrouping only in the tens place. Adding 555 and 209 requires regrouping only in the ones place. Adding 289 and 519 requires regrouping across two place values and results in a sum with a 0 in the tens place.
- "Show What You Know" (practice activities) aligns with each Explore activity in a scope (unit). Show What You Know requires students to demonstrate the depth of understanding aligned with the TEKS by applying the knowledge and skills learned over the course of the Explore lesson. For example, the grade 3 "Compare and Order Numbers Show What You Know - Part 1" activity under the "Explain" tab requires students to compare whole numbers up to 100,000 and represent comparisons using the symbols >, <, or =.
- Students demonstrate their depth of understanding across the unit through the Decide and Defend (open-ended assessments) in the "Evaluate" tab of each scope. The assessments prompt students to reason mathematically and support their ideas with evidence. For example, the grade 3 "Multiplication Models Decide and Defend" references a school bake sale scenario, where two girls sell different amounts of cupcakes at different costs. In the scenario, one thinks both earned the same amount of money, while the other thinks she earned more because she sold more cupcakes. Students decide who is correct and explain their thinking.

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

- Materials include questions and tasks that increase in rigor as the learning progression evolves through concrete understanding, representation, and abstract thinking. For example, grade 3 "Multiplication Models scope Explore 1" begins with guidance for the teacher asking students to look around the classroom to find objects in equal groups. The lesson continues with a discussion about items in our world that come in equal groups, like packs of markers or the wheels on a car. An increase in rigor and complexity progresses as students observe equal groups of counters and write addition sentences that describe the projected models. Students then discuss the meaning of the multiplication symbol and rewrite their sentences using it. Next, students rotate through different stations, read a word problem, sketch a model, write a repeated addition sentence, complete a multiplication sentence stem, and write an equation to match. To conclude the lesson, students reflect on their learning by answering open-ended questions, such as "What do you notice about each model? Explain how the models are similar and different?"
- "Represent and Interpret Data Explore 1" provides questions that increase in rigor and complexity throughout the lesson. The beginning of the lesson provides the question, "How many letters are in the shortest and longest name?" In the middle, the teacher poses the question, "How could we show our number of letters on a number line?" Toward the end, the teacher poses the question, "What is the relationship between the frequency table and dot plot?" The questions include Depths of Knowledge labels from 1 to 3 and lead to grade-level proficiency in the grade 3 math standards.
- Explore activities increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards. For example, the Explores for the grade 3 "Multiplication Strategies and Algorithms" scope progress as follows: Explore 1 - Commutative and Associative Properties, Explore 2 - Arrays, Explore 3 - Area Models and the Distributive Property, and Explore 4 - Algorithms.

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 scope and sequence for grade 3 demonstrate coherence across the course through a logical sequence that follows the natural progression of mathematics and provides opportunities for students to conceptually understand operations before their application. For example, the grade 3 "Course Rationale" in the "Teacher Toolbox" explains the purpose for ordering "Addition and Subtraction Strategies" before "Addition and Subtraction Problem Solving." Beginning with Addition and Subtraction Strategies allows students to build on previous grade 2 content as the initial scope of the school year. Once students gain proficiency with addition and subtraction operations, the opportunity to apply the skills occurs in the Addition and Subtraction Problem Solving scope.
- "Content Support" on the home page of each scope demonstrates the coherence of the mathematical topics across grade bands. This resource also includes "Background Knowledge," which describes the background content knowledge students learned in previous grades. For example, the grade 3 "Addition and Subtraction Strategies Content Support" states "Kindergarten students model addition and subtraction up to 10...In first grade, students compare and order whole numbers up to 120.Second-grade students compare quantities to 1,200." Content Support also includes "Coming Attractions," which explains how content

further builds into the next units or grades. For example, the scope tells teachers, "In fourth grade, students need to round numbers to the nearest 10, 100, or 1,000 through the hundred thousands place and use compatible numbers to solve more advanced problems" and "In fifth grade, students round decimals to the nearest tenths or hundredths place to estimate and determine solutions."

- The materials include "Vertical Alignment" in the "Content Unwrapped" link under the "Home" tab. This section demonstrates coherence across grade levels and lists the aligned standards from the current, previous, and future grade levels. For example, in grade 3 "Count Money" scope, Vertical Alignment indicates that students in grade 2 determine the value of a collection of coins up to one dollar to support TEKS 2.5A. Students in grade 3 determine the value of a collection of coins and bills to support TEKS 3.4C, and in grade 4, they solve problems that deal with measurements of money using addition, subtraction, multiplication, or division as appropriate to support TEKS 4.8C.

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

- In grade 3, students progressively build sophistication and strategy variety in multiplication and division throughout the course by explicitly connecting patterns and relationships. For example, the Course Rationale in the Teacher Toolbox explains the development of understanding through the order of the following scopes: "Multiplication Models, Multiplication Strategies and Algorithms, Division Models, Multiplication and Division Problem Solving, and Represent Numerical Relationships." This progression outlines a definitive focus on models and conceptual understanding before working with algorithms. In addition, allowing for more time with multiplication and division demonstrates going deep on big ideas, and as one of the important topics for grade 3, provides opportunities for students to connect patterns and relationships between multiplication and division. Multiplication and division patterns and relationships explicitly connect in the "Multiplication and Division Problem Solving" scope. "Explore 1" includes three main parts in the student journal, each exemplifying a different problem context for division and multiplication.
- "Content Support" on the home page of each scope includes a "Current Scope" that explains the coherence of patterns, big ideas, and relationships across units. For example, the grade 3 "Addition and Subtraction Problem Solving" scope states "Third-grade students solve equations using place value, properties of operations, and the relationship between addition and subtraction. These strategies were explored and developed in the previous scope and are applied here as students represent and solve a variety of problems."
- The grade 3 Course Rationale demonstrates coherence across units by explicitly connecting big ideas between units. It states, "In Grade 3, instructional time will be focused on four areas: (1) understanding and applying place value concepts and properties of operations; (2) adding, subtracting, multiplying, and dividing whole numbers; (3) representing fractions as numbers; and (4) applying geometric reasoning, including the attributes of quadrilaterals." A table includes the four big ideas and their connectedness throughout the course. For example, according to the table, the "Multiplication Models" scope connects to ideas 1, 2, and 4.

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 Content Unwrapped resource in the Home tab for each scope includes implications for instruction and vertical alignment. This section demonstrates the coherence across units by describing students' prior and future grade-level exposure to the content. For example, the grade 3 Multiplication Models scope states "Until this point, students have had experience only with multiplication as repeated addition with groups of equal numbers of objects being joined. "In grade 3, students must understand that each factor in a multiplication problem plays a different role, but switching the order of factors does not change the product. The Vertical Alignment indicates that in grade 4, students "Determine products of a number and 10 or 100 using properties of operations and place value understanding," to support TEKS 4.4B.
- "Accessing Prior Knowledge" in the "Engage" tab of each scope demonstrates coherence across units by connecting content learned in previous courses or grade levels. The activity assesses students' knowledge of previous grade level or unit content standards. For example, in the grade 3 "Compare and Order Numbers" scope, to assess students' previous grade-level knowledge, students read five student statements about comparing and ordering numbers and choose the statement they agree with.
- The "Visual Glossary" within the scopes menu provides a visual example of vocabulary cards from across the grade levels. The glossary demonstrates coherence across units by connecting the language learned in previous and future grade levels to the current course. Definitions and visuals adjust slightly for grade-level appropriateness; however, these cards support the connection of specific academic language across grade levels. For example, the visuals for the word *addition* remain similar with counters or apples representing each addend and the sum. From grade 2 to grade 3 the definition adjusts slightly from the word joining to combining and remains consistent from grade 3 to grade 4.

Materials demonstrate coherence at the lesson level by connecting students' prior knowledge of concepts and procedures from the current and prior grade level(s) to new mathematical knowledge and skills.

- The "Multiplication and Division Problem Solving" scope demonstrates coherence at the lesson level by connecting prior knowledge of concepts and procedures from the current grade level to new knowledge and skills using questions in the "Teacher Procedure and Facilitation Points." In Explore 1, the problem-solving procedure guidance consistently suggests questions that explore what information is known. The questions ask for models and strategies used to solve, and ways to check answers. When working with multiplication problem-solving in Explore, students choose any strategy from prior learning about multiplication.

- Materials connect prior knowledge of concepts and procedures from the previous grade level to new mathematical knowledge and skills using the "Implications for Instruction" section in the Content Unwrapped under the Home tab. This section provides teachers with information about prior learning to support the coherent connections ready to be made with new content. Guidance for teachers from the TEKS "Compare and Order Numbers" scope includes, "Students have had many prior experiences comparing and ordering numbers with and without symbols. However, they have only compared and ordered numbers up to 1,200. Emphasize the precise mathematical language by referring to numbers as greater and less (or fewer) than another number instead of saying larger or smaller."

Depth and Coherence of Key Concepts

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

The materials provide spaced retrieval opportunities with previously learned skills 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 3 "Compose and Decompose Fractions Suggested Scope Calendar" in the "Home" menu references "Daily Numeracy" as a "Warm-Up" option. Daily Numeracy provides spaced retrieval opportunities with previously learned skills and concepts across lessons and units. For example, in the "Daily Numeracy-Patterns" activity, located on the grade 3 "Scopes" page within the "Daily Numeracy Tile," students have an opportunity to create, describe, or extend patterns and sequences using projected images and a structured conversation led by the teacher. This activity supports students' engagement with previously learned relationships between math operations and patterns with numbers and builds numeracy skills.
- "Spiraled Review," in the "Elaborate" tab of each scope, provides spaced retrieval opportunities with previously learned skills and concepts across units and includes four questions. According to the directions, "Students review previous or current grade-level content based on the focal points set for each grade." In the grade 3 "Multiplication Models" scope, Spiraled Review includes word problems that involve rounding, estimation, and multi-step addition and subtraction.
- "Math Story" in the "Compose and Decompose Fractions" scope in the Elaborate tab provides spaced retrieval opportunities of previously learned concepts by including questions with addition and subtraction problem-solving representations and computations beyond questions about composing and decomposing fractions, the scope's main focus.

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

- Materials include interleaved practice of previously learned skills and concepts across lessons within a scope. For example, the grade 3 "Perimeter" scope includes opportunities for students to engage with the concept of perimeter in various contexts. First off, the "Hook" in the "Engage" tab incorporates pentagons and hexagons. Next, Explore 1 provides taped-off

shapes, where students list some of the examples, highlighting what's different from both the previous and the latter. Lastly, the "Problem-Based Task" in the Elaborate tab calls out rectangles.

- The Hook incorporates the perimeter of two-dimensional shapes, pentagons, and hexagons, which are combined repeatedly to construct a soccer ball. Explore 1 provides taped-off shapes within the classroom set up as stations for students to measure and calculate the perimeter. The Problem-Based Task within the Elaborate menu provides the opportunity for students to work on perimeter within the context of picture frames.
- Materials include the interleaved practice of previously learned skills and concepts across units when implementation follows the recommended scope and sequence. According to the grade 3 "Scope and Sequence" in the "Teacher Toolbox," the scopes for multiplication and division appear in the following order: "Multiplication Models, Multiplication Strategies and Algorithms, Division Models, and Multiplication and Division Problem Solving." The Multiplication Strategies and Algorithms revisits arrays and area models that also appear within the Multiplication Models scope.
- The Daily Numeracy provides interleaved practice with previously learned skills and concepts across lessons and units by requiring students to select and use diverse strategies. Teachers encourage the use of the most efficient strategy rather than relying on a single strategy for every problem by asking questions like, "How does (___ model, strategy) help you...?"

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.

- "Explore" requires students to interpret and analyze a variety of models and representations for mathematical concepts and situations. For example, in "Multiplication Strategies and Algorithms" scope Explore 1, students represent scenarios using number lines, arrays, and equal groups. After the lesson, the "Math Chat" provides several questions for the teacher to ask, including "What patterns did you notice when using different models to represent and solve the problems?"
- Each scope includes a "Foundation Builder" activity under the "Engage" tab. During Foundation Builders, students interpret and analyze a variety of models and representations. For example, the "Multiplication Models" scope Foundation Builder provides a slide show that includes a representation of two groups of four. Teachers ask students to discuss with partners what they notice and wonder about the model. An additional slide asks students to represent three groups of three counters using manipulatives or dry-erase boards and markers provided by the teacher.
- Explore requires students to evaluate a variety of models and representations for mathematical concepts and situations. For example, the "Area" scope Explore 4 "Student Journal" asks students to reflect on how they found the area of their scrap of fabric during the Explore activity and explain if there is only one way to solve area problems.

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

- Explore activities include questions and tasks that require students to create a variety of models to represent their understanding of mathematical situations. For example, in the "Addition and Subtraction Problem Solving" scope Explore 1, students build diagrams to solve addition and subtraction problems. Students use paper strips, markers, and scenario cards to create representations to solve the story problems. In student journals, students draw their diagrams, write the equations that could represent the problem, estimate the solution, solve the problem, and write a solution statement.
- Questions and tasks require students to create a variety of models to represent mathematical situations. For example, the Multiplication Models scope materials require students to represent multiplication using repeated addition, equal groups, arrays, area models, equal jumps on a number line, and skip counting.
- Each "Scope Explain" tab includes an "Anchor Chart" activity for the teachers to complete with the students. The "Addition and Subtraction Strategies" Anchor Chart requires students to create a variety of models to represent adding two three-digit numbers. The teacher provides pairs of students with a place value work mat, a number line work mat, a dry-erase marker, and an eraser. Students work with their partners to solve the problem using a strategy of their choice. Students then collaborate with another pair of students to compare models and solutions. The teacher invites different groups to complete the anchor chart with different strategies.

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

- The materials include questions and tasks that prompt students to apply conceptual understanding to new problem situations. For example, the "Small Group Intervention" activity in the "Intervention" tab of the Multiplication Models scope, requires students to use linking cubes to model multiplication expressions. Teachers invite students to describe their model of 6x4 and what it means. Facilitation Point 6 prompts the teacher to ask students what to do if they needed three times as many, instead of four times. Students discuss the meaning of this concept with their partner and then share it with the group. Students model the new situation and create an equation to match the model.
- "Problem-Based Tasks," located in the "Elaborate" tab for each scope, provide opportunities for students to apply conceptual understanding to new contexts. For example, in the ""Count Money scope Problem-Based Task, students create a guide for concession stand volunteers on how to find the total amount of a collection of coins or bills using the knowledge and skills they have acquired.
- "Math Stories," located within the Elaborate tab for each scope, support literacy development and provide opportunities for students to apply conceptual understanding to new contexts. For example, in the "Place Value Relationships" scope Math Story, students read a nonfiction selection about octopuses. Students use information from the text and their conceptual

understanding of place value and multiplication models to answer questions about the reading.

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.

- "Fact Fluency" practice activities on the scope "Home" page target specific skills or concepts that build the automaticity necessary to complete on-level tasks. For example, in "Fact Fluency: Addition and Subtraction," students practice strategies such as making ten, using doubles, and differences within 20.
- Students build math fluency through "Interactive Practice," an online platform within the "Elaborate" tab of each scope. For example, in the "Addition and Subtraction Strategies" scope Interactive Practice, students practice with estimation and compatible numbers in the context of a locked escape room scenario.
- "Fluency Builder" activities within the Elaborate tab of each scope provide resources for partner games that build fluency with grade-level skills addressed in the scope. For example, the Addition and Subtraction Strategies scope includes a Fluency Builder with a baseball theme. While alternating between being pitcher and batter, students earn runs by solving a variety of addition and subtraction equations.

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

- The materials include "Daily Numeracy" activities located on the "Scope" home page. The goal of Daily Numeracy activities is to "empower students to reason with numbers in an accurate, efficient, and flexible way." The Daily Numeracy routine begins as the whole group gathers to view a numeracy activity. The teacher invites students to think about how they would solve the problem mentally. Students use hand gestures to indicate their thinking status. Teachers facilitate and encourage an open dialogue in a safe environment where students lead the conversations using sentence stems.
- "Skill Basics" activities within the "Explore" tab of each scope provide students with opportunities to efficiently, flexibly, and accurately apply mathematical procedures throughout the unit. For example, in the "Multiplication Models Skill Basics" activity, "Students represent multiplication problems in a variety of ways and discuss the relationships among the models."
- Explore activities within the Explore tab of each scope utilize manipulatives for hands-on exploration of mathematical concepts to develop procedural skills throughout the unit. A strong conceptual understanding allows students to flexibly and accurately apply the knowledge and skills addressed in the Explore. For example, in the Addition and Subtraction Strategies scope Explore 3, students first build the addends using base ten blocks to find the sum. The teacher then asks students, "What other strategies can you use to solve addition problems?" The materials provide the following possible student responses: add using place value, decompose and add one place value at a time, and count using a number line. "Addition Work Mats" are provided to students to support them in utilizing the listed strategies.

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

- The "My Math Thoughts" activity in the scope "Explain" tab provides students the opportunity to evaluate procedures and processes for efficiency and accuracy within the lesson. In this activity, students write about their mathematical thoughts and ideas using three different avenues: writing about mathematical concepts and relationships, writing focused on problem-solving, strategies, and procedures, and writing about a student's attitude, experience, or mindset toward math. For example, in the Addition and Subtraction Problem Solving scope My Math Thoughts, students are asked to "Show your favorite way" to solve two problems. Next, students respond to the question, "Which operation do you like best: addition or subtraction? Describe your reasoning below."
- Materials include "Small-Group Intervention" activities within the "Intervention" tab of each scope that provide opportunities for students to evaluate processes and solutions for efficiency, flexibility, and accuracy throughout each unit. For example, in the Addition and Subtraction Problem Solving scope Small-Group Intervention Part III, the teacher provides pairs of students with a "Model Builder," dry-erase marker, and a set of "Scenario" cards. Students create their models of the scenarios and then share them with the class. Students follow the same procedure with number lines and equations. Finally, students select a

strategy to solve the problem. The teacher leads a discussion that includes how the strategies were alike and different, the benefits of each strategy, and which strategy is the easiest to use.

- Teacher directions within Explore provide opportunities for students to evaluate procedures, processes, and solutions for flexibility and accuracy through intentional questioning. For example, in the "Division Models," Explore 1, students explore division through sharing and making equal groups of objects. The teacher facilitates a discussion with questions such as, "Look at your model again. Does this model make you think of another math operation?" and "How could we check our division using multiplication?"

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

- "Content Support" within the Home tab of each scope supports teachers in guiding students toward increasingly efficient approaches by including background knowledge, misconceptions and obstacles, and content knowledge specific to the scope. For example, in the Multiplication Strategies and Algorithms scope, the Content Support resource includes examples and illustrations related to the commutative and associative properties of multiplication, arrays, area models, the distributive property of multiplication, and algorithms. Explanations help clarify student expectations and the most efficient ways to teach the processes within the standards.
- The "Troubleshooting" activity under the "Launch Into Grade 3" scope Intervention tab supports teachers to guide students toward increasingly efficient approaches. For example, one of the Troubleshooting prompts asks students, "What if your partner’s strategy is faster and they solve the problem before you?"
- The "Teacher Toolbox" includes a "Student Goal Setting" document. Teachers use the document to guide students to set goals toward increasingly efficient approaches to solving math problems.

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 *Teacher Guide*, within the "Scope Overview" under the "Home" tab, describes the TEKS addressed in the scope by highlighting key conceptual and procedural skills and concepts to be covered. For example, the *Area Teacher Guide* states "Students will find areas of simple rectangles, using multiplication to find the total number of square units (the number of rows multiplied by the number of square units in each row, or the length multiplied by the width)... Students will progress to finding the area of composite figures that can be decomposed into collections of non-overlapping rectangles."
- The "Grade 3 Course Rationale," within the "Teacher Toolbox" under "Curriculum Design," explicitly states how the conceptual and procedural emphasis of the TEKS are addressed. For example, "Students are given the opportunity throughout the scope to model problems and develop efficient methods for adding and subtracting within 1,000. The provided strategies not only foster numerical fluency but also reinforce students' understanding of place value and the relationship between addition and subtraction."
- The "Content Unwrapped" resource, under the Home tab of each scope, includes the following sections that explicitly state how the conceptual and procedural emphasis of the TEKS are addressed: "Standards," "Unwrapping the Standards," and "Vertical Alignment." For example, Unwrapping the Standards outlines "Verbs: What should students be doing?" and "Nouns: What concrete words should students know?"

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

- Questions and tasks within the "Explore" include the use of models, manipulatives, and pictorial and abstract representations. Teachers guide students in hands-on explorations using models and manipulatives. Students then record their models, equations, and all the work needed to solve the problem in their "Student Journal."
- Explore includes the use of concrete models. For example, in the "Multiplication Models" scope Explore 2, students create models of game boards using color tiles.
- Explore includes questions and tasks that include the use of concrete manipulatives and pictorial representations. For example, in "Represent and Interpret Data" scope Explore 2, students sort gummy bears by color and represent the color distribution with a vertical pictograph.

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

- The materials suggest students complete "Skill Basics" activities before participating in some Explore tasks. Skill Basics support students in connecting and explaining concrete models to more abstract concepts. For example, in the "Addition and Subtraction Strategies" scope Skill Basics activity, students use a "Hundreds Chart" and "Rounding Work" mat to practice rounding to the nearest 10 before completing "Explore 1 - Estimation and Rounding."
- Intervention activities, within the "Intervention" tab of each scope, support students in connecting, creating, defining, and explaining concrete and representational models to abstract concepts. For example, in the Multiplication Models scope, students read different scenarios about plants and create an equal group model to represent the pots of plants using paper plates and counters. Students share their models and discuss questions such as, "How can the model help us figure out the product?" Students use their work to create multiplication expressions and equations.
- "Show What You Know" activities within the "Explain" tab of each scope support students in connecting representational models to abstract concepts. For example, in the "Addition and Subtraction Problem-Solving Show What You Know," students draw a diagram and write an equation in addition to solving.

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.

- Materials provide opportunities for students to develop an academic mathematical language using the "Picture Vocabulary" within the "Explain" tab. Picture Vocabulary is used in tandem with "Explores" to allow students to connect vocabulary to their experiences during the Explore. The Picture Vocabulary may be projected to the class as a slideshow or printed for students to use as needed.
- Explore provides opportunities for students to develop an academic mathematical language using concrete models and manipulatives. For example, in the "Multiplication Models" Explore 2, students use colored tiles to model arrays. Students use the models to answer questions that develop academic vocabulary, such as: "Where do you see equal groups in the models we just built?" and "What do you call a row of equal rows of items?"
- "Vocabulary Strategies" within the Explain tab of the "Launch into Grade 3" scope provide a variety of vocabulary activities. Students develop academic mathematical language through vocabulary games, including Four in a Row, Guess My Word, and I Have Who Has. For example, the Four in a Row game requires students to flip a card and either provide the

definition or the vocabulary word in order to place a colored counter on the game board grid. The first student to complete four in a row, horizontally, vertically, or diagonally, wins the game.

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

- "Language Supports" within each Explore provide embedded guidance for the teacher to scaffold and support student development and use of academic mathematical vocabulary in context. For example, the "Addition and Subtraction Problem Solving" Explore 3 states "Encourage and assist students with using formal mathematical vocabulary....by connecting a student's informal language with the relevant mathematical terminology."
- *Teacher Guides* within the "Scope Overview" include scaffolds for students as they develop and use academic mathematical vocabulary. For example, in the *Represent and Interpret Fractions Teacher Guide*, Accessing Prior Knowledge, a facilitation tip for the teacher states "Model on the board with a picture of the pie partitioned into 4 equal pieces along with the fraction labeled with numerator and denominator."
- The materials use sentence stems and discussion starters to scaffold the use of vocabulary when speaking and writing about mathematics within the lesson. For example, in "Compare Fractions" Explore 2 "Math Chat," teachers select a "Structured Conversation Routine" to facilitate a conversation about the question, "How could you compare two fractions with the same numerator without a model?" The following example student response, which includes academic mathematical vocabulary, supports the teacher in facilitating student responses: "If both fractions have the same numerator, that means they both have the same number of parts, and we could use the denominators to compare...."

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

- Math Chats at the end of each Explore provide embedded teacher guidance to support the application of appropriate vocabulary in mathematical conversations and opportunities for students to continue building and refining their mathematical language toolkit throughout the course. Teachers begin the Math Chat by inviting the class to share their observations and learning from the Explore. Questions leveled by depth of knowledge guide the discussion. Math Chats also provide example responses to questions. For example, the Area Scope, Explore 1 prompts teachers to ask, "What did you notice about the garden sections and using the tiles as a strategy to model them?" The exemplar response provided is, "They were all rectangles. I could not build the whole garden section with tiles. I had to find a different way to find the area."

- The "Structures for Intentional Discourse" document within the "Structured Conversation" resource under the "Essentials" tab in the Teacher Toolbox guides the teacher on the appropriate application of discourse in mathematical conversations and provides opportunities for students to develop their math language toolkit over time. The document provides sentence stems for four areas of discourse: Provide Thinking, Agree, Disagree, Add On, Ask For Clarification, and Restate or Rephrase Others' Ideas.
- The "My Math Thoughts" activity within the "Explain" tab provides students the opportunity to write out their mathematical thoughts and ideas. Embedded teacher guidance supports the students in hearing, refining, and speaking math language with peers. Students discuss their thinking with neighbors to refine their thoughts before recording them on the "Student Handout." Students write their answers in complete sentences using correct spelling, syntax, and punctuation. For example, in the "Time" scope, students identify the time Sean started his art lesson and explain how they found the time. Students answer additional questions such as, "How do number lines help us solve this problem about time?"

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.

- "Explore" lists the process standards that are integrated appropriately into the materials. For example, in the "Multiplication Models" scope Explore 2, students determine the total number of objects in a scenario by using arrays and area models with embedded process standards A, D, E, F, and G.
- Materials include a "Scope and Sequence" within "Curriculum Design" under the "Essentials" tab in the "Teacher Toolbox." The Scope and Sequence lists the process standards integrated into each scope throughout the course. For example, the "Addition and Subtraction Strategies" scope connects to process standards 3.1ABCDEFG.

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

- "Process Standards" within the Teacher Toolbox describe how process standards are incorporated and connected throughout the course. The resource is organized into sections titled "Understanding the Standard," "What Teachers Should Do," and "Putting the Standard into Actions: What Might It Look Like?" The resource includes examples of how grade 3 students analyze mathematical relationships to connect and communicate mathematical ideas while learning about the place value system, money, and comparing fractions.
- The *Implementation Guide*, within the "Curriculum Design" link under the Essentials tab in the Teacher Toolbox, includes a section titled "Mathematical Process Standards." The guide explains how incorporating the process standards throughout lessons within the scopes

develops the good habits of a mathematician. This section provides some brief examples of how the process standards are embedded and further states, "We framed our lessons following the habits of effective thinkers in math."
- The Scope and Sequence shows how the process standards are incorporated in each scope throughout the course. For example, the Addition and Subtraction Strategies scope connects to 3.1ABCDEFG.

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

- Materials within the "Scope Overview" under the "Home" tab include a *Teacher Guide* with a "Scope Introduction" that explains how the process standards are incorporated into the unit and connect to the content standards. For example, in the "Perimeter" scope, the Scope Introduction states, "Students use equations to determine the perimeter of a figure when one or more side lengths is given." Students also use rulers to measure the side lengths of figures to determine the perimeter.
- Process Standards within the Teacher Toolbox include a description of how the process standards are incorporated and connected to the content standards addressed in each scope. For example, in the "Compare Fractions" scope, students reason about the sizes of fractions, analyzing their parts to conclude and justify the comparison using symbols, words, objects, or pictorial models.
- "Content Support" on the Home page of each scope includes a description of the process standards that are incorporated throughout the scope. For example, within the "Division Models" scope, students "apply division models to everyday situations such as forming teams for a field day, serving cupcakes, and hosting a birthday party" to apply process standard 3.1A.

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

- Explore includes an overview of the process standards incorporated into the lesson. For example, process standards 3.1ACEFG are incorporated into Explore 1 in the "Time" scope.
- Content Support on the Home page of each scope includes a section titled "Applying Mathematical Process Standards." This section details how process standards are incorporated throughout the lessons. For example, the Multiplication Models Content Support resource states that process standard 3.1A is incorporated when "Students solve multiplication problems related to a wide variety of everyday life situations, such as stocking grocery store shelves, preparing for a camping trip, and comparing the cost of the same items at two different grocery stores."

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 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.

- "Daily Numeracy Activities," within the "Daily Numeracy: Third Grade" tile, provide students opportunities to think mathematically, persevere through solving problems, and make sense of math using a structured routine and various stimuli. During the Daily Numeracy routine, students gather in a central location. The teacher displays a numeracy activity and invites students to think and solve the problem mentally. Students demonstrate perseverance and use hand signals to show whether they need more time or are ready to share their problem-solving strategy. Having at least one sharable strategy demonstrates they have made sense of the mathematics. After this, students are encouraged to articulate their thinking as the teacher records each strategy on the board. Additionally, to help facilitate discussion, provided sentence stems include: "My strategy is similar because___," "This does not make sense to me because___," and "This reminds me of ___."
- Explores includes "Procedure and Facilitations Points" with suggested prompts and exemplar student responses. The Procedure and Facilitation Points provide opportunities for students to think mathematically, persevere through solving problems, and make sense of mathematics. For example, in "Multiplication Models" scope Explore 1, the teacher displays a set of counters in equal groups. The Procedure and Facilitation Point 3a gets students thinking mathematically by asking "What do you see and what do you think it means?" Students are then asked to write a sentence describing the model. Next, to make sense of mathematics, the Procedure and Facilitation point 6a asks "How could you describe the model using the phrase groups of?" The teacher models how three groups of four can be written as 3x4=12, labeling each part; using three additional models, students describe using "groups of" and write multiplication equations. As evidence of perseverance, students rotate through stations

to create models, write descriptions, and record multiplication sentences for several scenarios. Additionally, Procedure and Facilitation Points 12a-c provide guiding questions to check for understanding or support struggling students.

- The materials include guidance for teachers to support students in making sense of mathematics by identifying misconceptions and obstacles and providing suggestions on how to address common errors. For example, in the "Multiplication Strategies and Algorithms" scope, the "Content Support" within the "Home" tab states that "students may believe that 8x2 and 2x8 have different products." The guidance directs the teacher to provide practice building arrays to allow students to visually see the commutative property of multiplication.

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

- Lessons and tasks support students in understanding and explaining that there can be multiple ways to solve problems. For example, in the "Addition and Subtraction Strategies Anchor Chart," within the "Explain" tab, students work with a partner using a strategy of their choice to add three-digit numbers. Next, students collaborate with another pair of students to compare models and solutions, then students fill out the anchor chart with different strategies and discuss the similarities and differences between the strategies.
- Materials include activities that require students to explain and justify that there can be multiple ways to solve problems. For example, in the "Addition and Subtraction Strategies" scope "Hook" activity, students watch a video showcasing a scenario about a basketball game. Students share ideas of multiple ways to find the total number of fans at both games, work in groups to solve the problem using the strategy of their choice, and gather as a class to explain different strategies and check answers.
- The "Problem-Based Task" within the "Elaborate" tab of the "Compare and Order Numbers" scope supports students in understanding, explaining, and justifying that there can be multiple ways to complete tasks. In this group activity, students plan two travel paths through as many states as possible, starting with smaller states, then progressing through larger states, and logging the routes numerically based on state size. After planning their routes, the groups explain and justify how they approached the challenge in different ways.

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

- The materials include lessons and tasks that require students to make sense of mathematics through doing, discussing, and writing about. For example, in the Multiplication Models "My Math Thoughts" activity within the Explain tab, students use math tools, create model representations, and draw different picture representations showing how they think about multiplication. Next, students discuss their representations with their peers and draw any newly discovered representations. Lastly, for specific chosen strategies, students formulate their reasoning in writing.

- Small group "Intervention" lessons, within the Intervention tab of each scope, require students to make sense of mathematics through doing, writing about, and discussing math with the teacher. For example, in the "Two- and Three-Dimensional Figures Small Group Intervention" lesson, the teacher models how to make a figure with two sets of parallel sides using a geoboard and rubber bands. Next, students create a model using the same criteria and discuss how some of the figures may look different, yet all still have two sets of parallel sides. Afterward, students write to explain, "What attribute did Carter most likely use to sort the polygons?"
- Daily Numeracy activities require students to make sense of mathematics through discussing math with peers. For example, during the Daily Numeracy activity "Blank Number Line," students place numbers, fractions, decimals, etc., on an open number line. The teacher supports students with guiding questions such as "Why did you place your number on that spot?" and "Is your number closer to ___ or ___?" As students place numbers on the blank number line, the teacher asks the class if they agree or disagree. Students respond using the sentence stems "I agree because....," "I disagree because...," or "Can you explain why you....?"

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.

- Clear instructions with questions and prompts are included throughout the material to guide students to share and reflect on their problem-solving approaches and explanations. For example, in the "Compare and Order Numbers Explore 1," the "Procedure and Facilitation Points" prompt the teacher to invite the class to a "Math Chat" to share and explain their observations and learning. The *Teacher Guide* includes questions to guide the discussion, such as, "How did you know which number was greater or less using place value?" Sample responses provide teachers with facilitation support.
- The materials support teachers in guiding students to share and reflect on their problem-solving approaches, arguments, and justifications. For example, in the "Compare and Order Numbers Accessing Prior Knowledge" activity, students read statements about number relationships and determine if they agree or disagree with each statement. Directions within the Procedure and Facilitation Points prompt the teacher to facilitate a class discussion that requires students to argue their positions and justify their answers. A facilitation tip in the Teacher Guide under "Home and Scope Overview" directs the teacher to provide a word bank and sentence stems such as, "I agree with statement...because...is...on the number line" to support clear student responses.
- "Decide and Defend" open-ended assessments provide opportunities for students to communicate their reasoning and assess understanding. Procedure and Facilitation Points for the assessment support teachers in guiding students to reflect on their problem-solving approaches, including justifications. For example, the "Represent Numerical Relationships Decide and Defend" requires students to decide if a girl is correct in stating that she spends 100 minutes per month riding her bike to school and to defend their thinking. Procedure and Facilitations Point 4 guides teachers to review the rubric with students to discuss strengths and areas for improvement.

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

- Prompts and guidance within the Explores support teachers in providing feedback when students struggle with understanding content. For example, in Compare and Order Numbers Explore 1, students compare the number of seats for different stadiums. Teacher guidance directs the teacher to support students who do not remember the symbols by relating them to the numbers' positions on a number line. Teacher directions prompt the teacher to say, "For example, a number farther to the left on the number line (<) is less than a number on the right, and the ‘less than’ symbol appears to point to the left."
- "Content Support," within the "Home" tab of each scope, includes a section titled "Misconceptions and Obstacles" to assist teachers in providing explanatory feedback based on anticipated misconceptions. For example, the Multiplication Models Content Support states "Students may see arrays as a collection of individual objects and fail to see the rows or columns as equal groups."
- "Foundation Builders" under "Engage" for each scope include prompts and guidance for addressing possible student misconceptions in a section called "Possible Preconceptions." For example, the Compare and Order Numbers scope suggests teachers support students who may not conceptually understand the symbols <, >, and = by making a connection between the less than/greater than/equal to symbols and how to read them or connect the symbol with the number’s relative position on the number line to help students remember what the symbol means. Additionally, teachers provide opportunities for students to practice reading comparison number sentences using academic language with a partner.