

IMRA Review Cycle 2024 Report



Publisher Name	Program Name
Accelerate Learning	STEMscopes Texas Math
Subject	Grade Level
Mathematics	5

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 5

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 1

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. The curriculum 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 curriculum 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 Texas Essential Knowledge and Skills (TEKS), English Language Proficiency Standards (ELPS), concepts, and knowledge taught in the course. Materials include suggested pacing (pacing guide/calendar) to support effective implementation for various instructional calendars (e.g., varying numbers of instructional days– 165, 180, and 210). Materials include an explanation for how concepts to be learned connect throughout the course. 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 5 include a scope and sequence document within the "Teacher Toolbox" tab under the "Curriculum Design" link. The scope and sequence outline the TEKS, ELPS, concepts, and knowledge taught in the course.
- The scope and sequence are organized 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, within the scope "Add and Subtract Decimals," the Explores listed are Explore 1 - Round Decimals, Explore 2 - Estimate Sums and Differences of Decimals, and Explore 3 - Add and Subtract Decimals. 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 located under the "Curriculum Design" within the "Teacher Toolbox" tab. The Implementation Guide provides educators guidance on using the curriculum in various calendar settings including 165 days, 180 days, and more than 180 days.
- The "Scope and Sequence" documents are aligned 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. A 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 Numerical Expressions" 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 5 "Course Rationale" located 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 5 are fraction and decimal operations, expressions, equations, and formulas, geometry and measurement, and data analysis.
- The grade 5 "Course Rationale" document includes a table that displays the areas of focus and connected TEKS for each scope. For example, the table indicates the connected areas of focus for the scope "Divide Decimals" are fractions and decimals operations and expressions, equations, and formulas. The connecting TEKS for the scope are 5.2A, 5.2C, and 5.3C.
- 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. They also help the educator internalize daily lessons by highlighting the essential elements that provide full coverage of the standards and guiding the selection of daily activities from the scope.
- Materials for each scope include a Teacher Guide located 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 that describe 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 and 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. The structure of this scope 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 5 "Represent and Compare Decimals Suggested Scope Calendar" lists objectives by day. For example, the day 3 objective states "Students use base ten blocks and place value disks to represent the value of digits in a decimal number to the thousandths place using expanded notation."
- 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 5 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 scope "Multiplication and Division Algorithms" states that "Kindergarten and first grades began developing a conceptual foundation of the base-10 system. Numbers were composed and decomposed...Understanding this relationship, students could fluently multiply and divide within 100." The vocabulary for the same scope includes terms such as algorithm, area model, and dividend.
- 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 "Multiply Decimals" scope states "In prior grade levels, students added and subtracted decimals using the standard algorithm. In this grade level, they continue to develop proficiency and fluency with this skill." Alongside linking knowledge, this section also provides common misconceptions. For the aforementioned scope, it states "One common misconception students have is that when a number is multiplied by another number, the product is always greater than the two factors."

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

- The 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.	2/2
1.3d	Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, enrichment).	1/1

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

Evidence includes, but is not limited to:

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

- 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 calendar the activities of the scope. The "Engage and Explore" activities provide a daily content objective. For example, the "Unit Conversions" scope "Explore 1" states "Students will solve problems by calculating single-step and multistep real-world problems related to both customary and metric length conversions." 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 5, the scope "Multiplication and Division Algorithms" suggests an assessment for day 4 titled "Show What You Know-Part 1: Multiplication Algorithm," 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 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 scope "Multiply Fractions" states "The following English Language Proficiency Standards are supported: 1.ACEFGH, 2.CDEGHI, 3.DEFGHIJ, 4.DFGIJK." Questions and tasks within the Language Supports align with the objectives. For example, the teacher guidance states "Instruct the students to read each scenario card silently. Invite them to write the main points or draw a picture of what is happening on a sticky note or piece of paper. They can discuss each scenario as a group once all the group members have finished reading. Remind students they are encouraged to read scenarios multiple times to be sure they understand it."

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 "Multiplication and Division Algorithms" includes 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 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 "Problem Solve with the Four Operations 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 materials include calculators and resealable envelopes.

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, within the "Multiplication and Division Algorithms" scope, the "Math Today-Melting Away" activity includes a video presentation of glaciers melting, causing landslides to occur on the land beneath them as the water flows down into lakes, rivers, and oceans. Students then decide the current volume of a section of Lake Palcacocha considering the lake is 34 times what it was in 1947.
- 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, students practice prior grade-level skills by accessing the following activities from home: "Estimating Solutions, Multiplication Models, and Standard Algorithm for 2 Digit x 2 Digit."

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 5 include a variety of assessments within each lesson. For example, in the "Add and Subtract Decimals" scope within the "Engage" tab, an "Assessing Prior Knowledge" assessment asks "students to choose the solution that best represents a real-world scenario with subtraction of decimals to the hundredths place using the standard algorithm," providing the teacher an opportunity to gauge students' prior knowledge. Within the "Explain" tab, the "Show What You Know-Part 1: Round Decimals" formative assessment asks "students to apply the knowledge and skills learned during the Explore using this practice." Within the "Elaborate" tab, the "Problem-Based Task - Ice Cream Sundaes" lesson assessment allows students to work collaboratively and 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 5, the Add and Subtract Decimals scope includes a formative assessment "Decide and Defend" where students read a scenario and decide which of the two students solved the problem of having enough water correctly. 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 Divide Decimals scope includes sections for teachers to take observational notes on 5.3A, 5.3F, and 5.3G. The checklist in this scope serves as a resource for 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." The Suggested Scope Calendar 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 that it is "A standards-based assessment to determine the student's ability to solve mathematical problems efficiently and accurately. The definition for Decide and Defend states that it is "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 that "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 Add and Subtract Decimals scope, the Decide and Defend assessment includes a page guiding 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 Add and Subtract Decimals 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 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 and Division Algorithms" skills quiz heat map lists questions 1 through 6 that correlate to TEKS 5.3B. The post-assessment benchmark heat map indicates the assessment aligns with 23 grade 5 standards. For example, questions 31 and 32 align to 5.8C. Question 31 requires students to represent the input and output values on the graph in an input-output data table. Question 32 requires students to represent data from a list of coordinates on a coordinate grid and then select two true statements about the data representation. Both questions require students to graph in the first quadrant of the coordinate plane, aligning the diagnostic assessment to grade-level TEKS.
- Within the "Classify Two-Dimensional Figures" scope, "Explore 1" includes an exit ticket for students to complete that provides the teacher with data on student understanding of the attributes of polygons. TEKS 5.5A states "Classify two-dimensional figures in a hierarchy of sets and subsets using graphic organizers based on their attributes and properties." The formative assessment aligns with a breakout of 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 answers, 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 Multiplication and Division Algorithms scope indicates one question at DOK level 1, 10 questions at DOK level 2, and one question at DOK level 3. This question set shows that the questions vary in level of complexity within the assessment.

- The observation checklists found within 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, or 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 are included for 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. This information section directs teachers to an outside resource for activities.
- 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; however, the response to student performance is not specific to the assessment or individual student needs.
- 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 "Divide Decimals" 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 "Add and Subtract Decimals" scope, the first of four columns titled "Standard" lists the standard as 5.2C. The "Skill or Key Concept" column states "I can round decimals to the nearest tenth or hundredth." 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" under 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 5 Numerical Expressions scope includes 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 5 Classify Two-Dimensional Figures scope, the Procedure and Facilitation Points step number 3 encourages students to work in pairs to discuss how the shapes on the set of shape cards are similar and different. Steps 3a and 3c guide the teacher to ask, "What do all of these shapes have in common?" and "What makes all of these shapes polygons?"
- 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 5 Divide Decimals scope includes the activity, "Skill Basics-How to Create and Read a Multiplication Chart" which supports the skill development necessary to be proficient with grade 5 content. In this activity, students manipulate rows and columns of an incomplete multiplication chart to identify patterns and determine missing numbers before filling in a blank multiplication chart and identifying patterns of even and odd numbers in the chart.

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 5 Balance a Budget scope defines expense as "money spent on a good or service" and uses a picture of several expenses with price tags. Teachers access the vocabulary resource as a slideshow, flashcards, or student handout.
- Materials include embedded supports for pre-teaching vocabulary within the "Foundation Builder" in the "Engage" tab, an early intervention activity meant to fill gaps before diving into new content. For example, in the grade 5 Multiplication and Division Algorithms 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 product and operation, 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 provided for the word operation, states, "Division is the inverse operation of multiplication?"
- The grade 5 Multiply Fractions scope provides an anchor chart within the Explain menu of the scope. The anchor chart supports students' acquisition of academic language 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 Multiply Fractions scope includes a Teacher Guide within the Home menu Scope Overview. The Teacher Guide provides specific facilitation tips for students who have demonstrated proficiency in grade level concepts and skills. For example, the facilitation tip for Accessing Prior Knowledge states "Allow students to draw any model of their choice. For example, students might choose to model the scenario using fraction circles or tape diagrams."
- 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, in grade 5, scope Classify Two-Dimensional Figures, the Create Your Own activity provides the students with the following scenario, "Your school has been entered into a competition to create an app that will organize two-dimensional shapes by attributes. The math teachers on campus are confident you can create the winning app." Students brainstorm ideas, sketch out their app or build it on a computer, and create a presentation to explain, demonstrate, and sell their app to the math teachers at school.
- The "Scaffolded Instruction Guide" in the "Home" tab for the "Multiply Fractions" 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 5.3A: career connections, create your own, and choice board. The "Career

Connections-Paula Deen" activity within the "Elaborate" menu highlights Paula Deen as a chef with a brief passage and asks questions such as, "How does Paula Deen use problem-solving skills?"

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, explaining, and communicating concepts to be learned explicitly within each scope. For example, the "Classify Two-Dimensional Figures" scope Anchor Chart directions prompt the teacher to prepare the chart by setting up a section titled "Classify Polygons" and to gather markers for student participation. Step 2 prompts the teacher to review the term polygon and discuss examples of attributes that may be used to sort them. Step 3 prompts the teacher to create a hierarchy diagram to include a branch for each attribute listed by the students. Step 4 guides the teacher to include sizes of angles in the discussion and to ask questions such as, "Does the orientation of parallel sides matter?" and provides, "No, they can face any direction as long as they do not touch" as a possible student response. The print files within this section include an example anchor chart.
- The "Unit Conversions 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 "Explore 1" states "Also reference a yardstick. Have the students observe that a yardstick is slightly shorter than a meter stick. Some measuring tools have standard units (inches, feet, and yards) on one side and metric units (millimeters, centimeters, and meters) on the other. If this is the case in your classroom, have the students observe that the standard units are spaced farther apart and the metric units are spaced closer together. This will help students determine which side of the tool to use when measuring."

- The grade 5 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 "Unit Conversions" scope, the specific guidance for the Explore 1 procedure and facilitation points tell the teacher to explain the activity directions and rotate students through stations. Specific prompts for the teacher to ask while facilitating state "a. DOK-1 How did you convert meters to centimeters? b. DOK-1 How did you convert inches to yards?"

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 them 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. The "Teacher Guide Math Chat" section provides questions of different depths of knowledge levels to solicit higher levels of discourse. For example, in the grade 5 "Represent and Compare Decimals" scope, Explore 3 prompts the teacher to ask DOK-2 "How did you know which number was greater or less?" Sample student responses are provided before asking the DOK-1 question, "What tools could help you do this?" An additional DOK-2 question to solicit a higher level of discourse asks, "In order to compare two numbers, do the wholes need to be the same size? Why or why not?"
- The "Multiplication and Division Algorithms" scope includes a variety of instructional approaches within the Explain menu of the scope. 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. Each "Explain" includes teacher guidance and recommendations for effective lesson delivery and facilitation.
- The materials provide guided instructions for tasks that allow active participation, exploration, and discovery. For example, in the grade 5 "Represent and Compare" decimals scope, the *Teacher Guide* for Explore 1 guides the teacher to begin the lesson by reviewing the relationships between base ten blocks. It prompts the teacher to hold up a flat, a rod, and a small unit cube and to ask the question, "If the flat is considered one whole, what are the values of the other pieces?" Sample student responses include "The rod is one-tenth, because it takes 10 of them to make the flat." Step 3 prompts the teacher to pass out a bundle of 100 craft sticks to each group, along with a few base ten block flats and rods. The teacher tells students to assemble mini sculptures that are painted and used to decorate bedrooms, playrooms, offices, and more. Step 4 guides the teacher to show students how to build one sculpture. Step 5 instructs the teacher to set a timer for 30 seconds while groups build as

many sculptures as possible. The lesson ends with Step 8, when students share their observations and learning.

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 5, the "Multiply Decimals" scope supports multiple types of practice and includes teacher guidance for effective implementation. The "Hook, Part II: Post-Explore" begins with a collaborative practice activity, as follows, "Project the Scale Mural Drawing for the class or distribute a printed Scale Mural Drawing for each group." Teacher guidance suggests monitoring and talking with students and providing encouragement for various models. 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.
- Materials include "Problem-Based Tasks" under the "Elaborate" tab within each scope. 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 5 "Classify Two-Dimensional Figures" scope, the procedure and facilitation points guide the teacher to use gestures, pointing at objects, and visuals as appropriate, and to 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 advanced levels. For example, to facilitate discourse, the Speaking section includes the following differentiated sentence stems: for beginner proficiency, "There are ___ groups of counters" and "A ___ has ___ sides"; for intermediate proficiency, "Yes/No, quadrilaterals ___ polygons because quadrilaterals"; and for the advanced proficiency "Are quadrilaterals polygons? Explain to your partners how you know."
- The materials include dedicated sections in the lesson plans for emergent bilingual students. For example, the grade 5 "Add and Subtract Fractions" scope, "Explore 1-Prime and Composite Numbers" lesson plan, includes a language support section guiding the teacher to call attention to examples of math terms. Supports include using a think-aloud strategy to model mathematically precise language. Sentence stems such as, "The number ___ is (prime/composite) because ___" support student group discussions.

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 to use materials to serve linguistically diverse populations. For example, the "Resources and Tools" section lists features used to 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 the grade 5 "Multiplication and Division Algorithms" 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 *product* and *operation* 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 *product* states, "The product of 3×4 is 12."
- 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 "Perimeter, Area, and Volume" scope provides guidance for supporting written discourse. For example, Part II of Explore requires students to write a clue about their large dog or small dog fence using sentence structures given by the teacher. One of the sentence structures states "The area is _____, and the length is _____. What is the perimeter?" When students use vocabulary words in written context about models with the support of a sentence structure, they make cross-linguistic connections, acquire academic vocabulary, and further comprehend new math concepts.

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 "Curriculum Design" section includes some guidance regarding Dual Language Immersion (DLI) 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 implementation of the program 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 to the TEKS. For example, "Explore 3" within the "Add and Subtract Decimals" scope provides practice opportunities for adding numerical values with different levels of sophistication, including adding decimals to the thousandths place. For example, Mr. Huntley's Patio scenario includes 120.825 and 32.4. These numerical values include different amounts of digits and values before and after the decimal. This problem requires students to attend to place value when adding to find the sum. By interacting with the various quantities within the scenarios, students demonstrate the depth of understanding for adding and subtracting aligned to the TEKS. Students work with real-world scenarios to apply problem-solving strategies.
- "Show What You Know" (practice activities) aligns with each Explore activity in a scope (unit). Show What You Know activities require students to demonstrate depth of understanding aligned to the TEKS by applying the knowledge and skills learned over the course of the Explore lesson. For example, the grade 5 "Represent and Compare Decimals Show What You Know - Part 1" activity in the Explain tab requires students to represent the value of the digit in decimals through the thousandths using expanded notation and numerals.
- 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 5 "Multiply Decimals Decide and Defend" references a babysitting scenario where a student was offered two jobs on the same night. The first job paid a smaller amount per hour for four hours, and the second job paid more per hour for three hours. Students determine if the student made the right decision when they chose the job with the higher hourly rate and explain their thinking.

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

- "Add and Subtract Fractions Explore 3" provides questions within the "Procedure and Facilitation Points" that increase in rigor and complexity throughout the lesson. The beginning of the lesson provides the question, "When we have equal-sized pieces, what happens to the denominators?" In the middle, the teacher poses the question, "How will you find a common denominator?" Toward the end, the teacher poses the question, "How many possible common denominators are there for any two fractions?" The questions include Depths of Knowledge labels from 1 to 3 and lead to grade-level proficiency in the grade 5 math standards.
- Materials include tasks that increase in rigor as the learning progression evolves from concrete understanding, representation, and abstract thinking. For example, in grade 5 "Represent and Compare Decimals" scope Explore 1, students first use base ten blocks and place value disks to represent the value of digits in a decimal number to the thousands place using expanded notation and expanded form using decimals and fractions. Students reflect on their learning by answering open-ended questions such as, "How can a model help with representing a decimal number in expanded notation?"
- Explore activities increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards. For example, the Explores for the grade 5 "Multiplication and Division Algorithms" scope progress as follows: Explore 1 - Multiplication Algorithm and Explore 2 - Division Algorithm.

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 5 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 5 "Course Rationale" in the "Teacher Toolbox" explains the purpose for the order of the initial two scopes of the course. The "Multiplication and Division Algorithms" scope instruction occurs before the "Problem Solve with the Four Operations" scope to provide students the opportunity to understand multiplication and division computation of whole numbers within new magnitudes before engaging in more complex grade 5 problem-solving.
- "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 5 "Balance a Budget Content Support" states "Students have learned about financial planning and money management since kindergarten...Students in third grade learned about the benefits and drawbacks of credit...Fourth-grade students compared fixed and variable expenses and learned how to calculate profit." Content Support

also includes "Coming Attractions," which explains how content further builds into the next units or grades. For example, the scope informs teachers, "In sixth grade, students will use what they have learned about developing a system to keep and use financial records to balance a check register that includes deposits, withdrawals, and transfers."

- 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 the grade 5 "Perimeter, Area, and Volume" scope, the Vertical Alignment table indicates that students in grade 4 use models to determine the formulas for the perimeter and for the area of a rectangle (4.5C). In grade 5, students use concrete objects and pictorial models to develop the formulas for the volume of a rectangular prism (5.4G).

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

- In grade 5, students progressively build sophistication and strategy variety with all four operations throughout the course by explicitly connecting patterns and relationships. For example, the whole number and reasoning group of scopes allow for a focus on individual operations. The Problem Solve Using the Four Operations scope allows students to connect patterns and relationships between all operations. Explores within the scope provide estimation instruction and two levels of problem-solving. Explore 2 scenario cards incorporate multiple problem types and numberless scenarios where students generate the numbers that fit the context of the situation. These problems promote connections between patterns and relationships of operations as the contexts and steps require students to understand how the math actions in the problem relate and connect to the four operations.
- 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, in the grade 5 "Add and Subtract Decimals" scope, it states "Fifth-grade students round decimals to the nearest whole, tenth, and hundredths place. Students at this grade level have a deep understanding of place value and number sense, so they explain and reason about rounded answers. It is important to know that the procedure for rounding is not taught after fifth grade. Students are expected to apply rounding while estimating an approximation and to determine the reasonableness of an answer. Students apply their knowledge of decimals to thousandths as they add and subtract. Strategies based on place value and properties of operations are part of the learning. Students justify their strategies and solutions using their reasoning skills."
- The grade 5 Course Rationale in the Teacher Toolbox demonstrates coherence across units by explicitly connecting big ideas between units. It states "In Grade 5, instructional time will be focused on four areas: (1) adding and subtracting fractions and decimals with procedural fluency as well as developing an understanding of multiplication and division of fractions and decimals; (2) using expressions, equations, and formulas to represent various concepts; (3) extending geometric reasoning to include volume; and (4) organizing, representing, and interpreting sets of data." A table includes the four big ideas and their connectedness

throughout the course. According to the table, Scope 5.2AB Represent and Compare Decimals connects 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, located within 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 5 "Multiply Decimals" scope states "In prior grade levels, students added and subtracted decimals using the standard algorithm. In this grade level, they continue to develop proficiency and fluency with this skill." Vertical Alignment indicates that in grade 6, students "Multiply and divide positive rational numbers fluently" (6.3E).
- "Assessing Prior Knowledge," located within 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 5 "Divide Fractions" scope, students partition a whole into equal parts. They identify a unit fraction and demonstrate how unit fractions are combined to make other fractions.
- 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, and these cards support the connection of specific academic language across grade levels. An example of a picture vocabulary card that has consistent visuals in grades 4, 5, and 6 with only a slightly adjusted definition for the complexity of the work in grade 6 is *dividend*.

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 "Add and Subtract" decimals 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 the "Instructional Supports" section within Explore 1. The guidance states "Provide an anchor chart or completed notes with the place values labeled for students to use as a reference until they gain confidence and master the location of each place value within a number." This guidance connects to the prior scope as the scope's order follows the pacing from the natural progression of mathematics. The prior scope, "Represent and Compare Decimals," focuses on place value through the representation and comparison of decimals using a place value mat as a tool.

- 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. Teacher guidance from the "Multiply Decimals" scope includes "Students should build on the strategies that they used when multiplying whole numbers and their understanding of place value, but they should also understand that there are some differences. For example, students may decompose the decimal number into a whole number and a decimal to multiply. Encourage learners to explore this further to find out if it works with all decimal numbers. Using an area model is a good way to begin representing multiplication of decimals since students have experience using an area model to multiply whole numbers."

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 5 "Divide Decimals 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 5 "Scopes" page within the "Daily Numeracy Tile," students 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," located within the "Elaborate" tab of each scope, provides spaced retrieval opportunities with previously learned skills and concepts across units. According to the directions, "Students review previous or current grade-level content based on the focal points set for each grade." The resource includes four questions and is available in digital and print formats. In the grade 5 "Represent and Compare Decimals" scope, Spiraled Review includes word problems involving multi-step multiplication problems, division, comparing fractions with unequal denominators, and multiplication models.
- "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. Available digitally, Math Story includes printable handouts and provides an opportunity for independent practice.

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

- Materials provide interleaved practice of previously learned skills and concepts across lessons within a scope. For example, "Scope 5.3AFG - Divide Decimals" includes opportunities for students to engage with the concept of dividing decimals in various contexts. The "Hook" in the Engage tab incorporates dividing decimals by dividing up a restaurant bill. Explore 1 provides orders of dog food to a decimal weight that needs to be split into a whole number of servings. Math Story within the Elaborate menu provides the opportunity for students to work on dividing decimals with the story "A Tale of Two Beverages."
- Materials provide interleaved practice of previously learned skills and concepts across units when implementation follows the recommended scope and sequence. According to the grade 5 "Scope and Sequence" in the "Teacher Toolbox," the scopes focused on decimals appear in the following order: "Represent and Compare Decimals, Add and Subtract Decimals, Multiply Decimals, and Divide Decimals." Placing the decimal scopes in proximity to one another allows students to retrieve skills and concepts involving decimals across time in multiple contexts. Both multiplication and division of decimal scopes incorporate array and area models.
- 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, analyze, and evaluate a variety of models and representations for mathematical concepts and situations. For example, in the "Add and Subtract Fractions" scope Explore 3, students determine common denominators by drawing and partitioning models. After the lesson, the "Math Chat" provides several questions for the teacher to ask, including "What did you notice about the model method and the multiples method?"
- 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, in the "Unit Conversions" scope Foundation Builder, students use centimeter cubes and color tiles to build and draw models for each conversion on the "Student Handout." Teachers ask students, "How does your equation relate to your model?"
- Explore requires students to evaluate a variety of representations for mathematical concepts and situations. For example, the "Problem Solve with the Four Operations Explore Student Journal" asks students to reflect on the variety of ways they estimated during the Explore activity, including round up, round down, round to different place values, compensation, and compatible numbers.

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 "Multiplication and Division Algorithms" scope Explore 1, students use area model templates to multiply the length and width of each building presented in the story problem scenario. Students draw their area models and record their partial products for each part of their area model in their Student Journals. To show understanding of the concept, students answer questions such as, "How did you know this scenario could be solved using multiplication?"
- Questions and tasks require students to create a variety of models to represent mathematical situations. For example, the "Multiply Decimals" scope requires students to use objects and pictorial models alongside their understanding of place value, properties of operations, and multiplication of whole numbers to multiply decimals.
- Each Scope under the "Explain" tab includes an "Anchor Chart" activity for the teachers to complete with the students. The "Divide Decimals Anchor Chart" requires students to create a variety of models for division expressions. The teacher provides pairs of students with base ten blocks. Students represent expressions using base-10 blocks, arrays, and area models.

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 "Numerical Expressions" scope, requires students to use work mats to practice simplifying expressions that do not involve exponents. The teacher asks questions such as, "What would happen if we solved this expression out of order?"
- "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 "Balance a Budget" scope Problem-Based Task, students complete an eight-week budget to see if two girls can save enough money to go to a concert.
- "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 Add and Subtract Fractions scope Math Story, students read a nonfiction selection about glue. Students use information from the text and their conceptual understanding of fractions 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 "Add and Subtract Decimals" scope Interactive Practice, students judge the Rocket Racers winners by looking carefully and comparing their times.
- "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, in the "Represent and Compare Decimals" scope Fluency Builder, students play a game by choosing a number card from their hand to make the comparison on the table true. Students record the comparison on a "Student Recording Sheet."

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 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 and Division Algorithms" Skill Basics activity, "Students solve two-digit by two-digit multiplication problems using area model and partial products strategies."
- 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 "Divide Decimals" scope Explore 3, students use base ten blocks to draw arrays and area models to solve division problems involving decimals.

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 within the "Explain" tab in each scope provides students with an 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 "Represent and Compare Decimals" scope My Math Thoughts, students are asked to utilize both number lines and expanded notation to help them compare numbers. Students are asked to describe what is easier to understand about decimals and what is more difficult to understand.
- 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. For example, in the Add and Subtract Decimals scope Small-Group Intervention, students make connections between the partial sums and the standard algorithm as they solve problems throughout the lesson. Teachers ask questions such as, "Are the values we are adding the same as the partial sums? Why do they look different?"
- 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 "Multiply Decimals" scope Explore 1, students solve problems as they make

connections between whole-number multiplication and decimal multiplication. To check for understanding, teachers ask questions such as, "What did you notice about the value of the products as they compared to the values of the original factors? Why do you think this is?"

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

- "Content Support" within the "Home" tab of each scope supports teachers to guide students toward increasingly efficient approaches by including background knowledge, misconceptions and obstacles, and content knowledge specific to the scope. For example, in the Represent and Compare Decimals scope, Content Support includes an explanation and an example of how to use visuals to help students concretely see the value of each digit, using base ten blocks and place value charts.
- The "Troubleshooting" activity under the "Launch Into Grade 5" 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 *Represent and Compare Decimals Teacher Guide* states "Students represent values of decimals within the tenths, hundredths, and thousandths places, using base ten blocks, expanded notation, and numerals.... Students compare and order decimals to the thousandths place and use comparative language and symbols to make comparisons."
- The "Grade 5 Course Rationale," within the "Teacher Toolbox" under "Curriculum Design," explicitly states how the conceptual and procedural emphasis of the TEKS are addressed. For example, "To focus their thinking on part-total additive and multiplicative relationships, students algebraically reason using diagrams and equations with a letter standing for an unknown quantity."
- 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 "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 any work needed to solve the problem in their "Student Journal."
- Explore includes the use of concrete models. For example, in the "Add and Subtract Fractions" Explore 2, students find common denominators using fraction tiles or towers.
- Explore includes questions and tasks that include the use of concrete manipulatives and pictorial representations. For example, in the "Represent and Interpret Data" scope Explore 2, students flip a coin ten times as they gather data to create a frequency table.

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 "Multiplication and Division Algorithms" Skill Basics activity, students use a strategy work mat to review area models and partial products before completing Explore 1 - Multiplication Algorithm.
- Intervention activities, within the "Intervention" tab of each scope, support students in connecting, defining, creating, and explaining concrete and representational models to abstract concepts. For example, in the Multiplication and Division Algorithms scope, students create and discuss an array of 2×6 and relate it to a 4×6 array. Students discuss their observations and create a new array of 8×6 . Students then discuss how to use the array to solve a problem such as 8×7 . Students continue creating and combining arrays and ponder the question, "Why is this helpful when trying to remember multiplication facts?" Students continue to practice to help see patterns and understand how arrays relate to the area model.
- "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 Add and Subtract Decimals Show What You Know, students place numbers on a number line before rounding.

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 "Explore" 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 "Add and Subtract Fractions" Explore 2, students use fraction tiles to find common denominators. Students refer to their fraction tile models to answer questions that develop academic vocabulary, such as: "Why do we need a common denominator to add or subtract?" and "How can the fraction tile models be used to solve the equations?"
- "Vocabulary Strategies" within the Explain tab of the "Launch into Grade 5" 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 "Divide Decimals" Explore 3 provides the following sentence structures: "To use an area model, first I _____, then I _____" and "Area Models and Arrays are similar because_____."
- *Teacher Guides* within the "Scope Overview" include scaffolds for students as they develop and use academic mathematical vocabulary. For example, in the *Classify Two-Dimensional Figures Teacher Guide*, within the "Hook" section, a facilitation tip prompts the teacher to consider having a vocabulary word bank or word wall accessible to students to refer to when discussing the properties of the shapes.
- 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 the "Classify Two-Dimensional Figures Hook" under "Engage," a facilitation tip within the teacher guide states, "Provide students with sentence stems to use when discussing how they classified each of the shapes into a specific category." Some examples include: "Shape ___ is a ___ because..." or "We classified shape ___ as a ___ because...."

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 exemplar responses to questions. For example, the "Numerical Expressions" Explore 1 prompts teachers to ask, "What does simplify mean as in "simplify an expression?" The exemplar response is, "It means to make the expression less complicated and easier to understand. To do this, I perform all the operations in the expression until I have one value."

- The "Structures for Intentional Discourse" document within the "Structured Conversation" resource under the "Essentials" tab in the "Teacher Toolbox" provides teacher guidance 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 "Multiplication and Division Algorithms" scope, students show a neighbor their favorite way to multiply a three-digit by two-digit problem. Students talk through each step of their multiplication process.

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 "Multiply Decimals" scope Explore 2, students estimate products when multiplying multi-digit numbers to the hundredths by rounding and reasoning about their size, with embedded process standards A, D, E, F, and G.
- Materials include a "Scope and Sequence" document within the "Curriculum Design" resource 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 "Multiplication and Division Algorithms" scope connects to 5.1ABCDEFG.

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 fifth graders analyze mathematical relationships to connect and communicate mathematical ideas while learning about ordered pairs, rounding decimals, and prime and composite numbers.
- 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 document shows how the process standards are incorporated into each scope throughout the course. For example, the Multiplication and Division Algorithms scope connects to 5.1ABCDEFG.

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, Area, and Volume" scope, the Scope Introduction states, "Building on previous knowledge and understanding, students apply their knowledge of solving problems related to the perimeter and area of rectangles to composite figures."
- "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 "Prime and Composite Numbers" scope, students work together and analyze examples to determine their validity, make conjectures, and prove their work.
- "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 "Unit Conversions" scope, students "apply unit conversion to problems arising in everyday life, such as drawing models that show measurements between city buildings, determining how much weight zoo animals eat in different foods, analyzing different amounts of food and drink needed for a town party, and converting measurements of items bought at a holiday fundraising event" to apply process standard 5.1A.

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

- Explore includes an overview of the process standards incorporated in the lesson. For example, process standards 5.1ABFG are incorporated into Explore 1 in the Unit Conversions scope.
- A Content Support resource 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 and Division Algorithms Content Support resource states that process standard 5.1A is incorporated when "Students apply multiplication and division algorithms to problems arising in everyday life and workplace situations, such as finding the area of a room for carpet."

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: Fifth 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" include "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 the "Multiply Fractions" scope, Explore 1 allows students to model scenarios involving fractions using the concept of equal groups, write the addition and multiplication expressions, and then compare repeated addition and multiplication of fractions.
- 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 "Multiply Decimals" scope, the "Content Support" within the "Home" tab explains that students might think that multiplication leads to

larger quantities. The material guides the teacher to use visual models to multiply decimals which helps students "make better generalizations about the products of decimals."

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 "Add and Subtract Fractions Anchor Chart," within the "Explain" tab, students participate in the creation of the multi-sectioned anchor chart to illustrate the problem $1/4 + 2/3$. Students share the method they chose to add and subtract fractions. Students take turns sharing their models and writing expressions based on the different models they used. Students discuss how each part of the expression relates to the model.
- Materials include activities that require students to explain and justify that there can be multiple ways to solve problems. For example, in Multiply Decimals Explore 1, students use base ten blocks and a hundredths grid to represent cake orders placed by a bakery's customers. Students use the models to calculate how much to charge for the cakes. Students write expressions to match their model, solve, and explain how the representations of the orders demonstrate the relationship between multiplication and addition.
- The "Problem-Based Task" within the "Elaborate" tab of the "Problem Solve with the Four Operations" scope supports students in understanding, explaining, and justifying that there can be multiple ways to complete tasks. In this activity, students work in groups to plan a relative's birthday party at a favorite restaurant. Each group calculates the cost of the party based on each attendee's meal selection. After calculating the costs, groups discuss how they tackled 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 the students to make sense of mathematics through doing, discussing with peers, and writing about math. For example, in the "Add and Subtract Decimals My Math Thoughts" activity within the Explain tab, students estimate how much honey a bear ate, solve the problem, explain their strategy, discuss their thinking with their peers, and write their thoughts on paper.
- Daily Numeracy activities are designed to require students to make sense of mathematics through discussing math with peers. For example, during the Daily Numeracy activity called "Guess the Number," students count collections, choral count, or complete patterns based on skip counting through the use of objects, pictures, and graphic organizers.
- 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 Multiply Decimals Small Group Intervention lesson, the teacher prompts students to create a model for 8×5 using place value disks. The teacher asks students, "How are you creating your model?" Students discuss how they use specific place

value disks to show the five in each group and write the multiplication equation represented by the model. The teacher instructs students to sketch the model on their work mat and write the matching multiplication equation. The process is repeated using the problem 8×0.5 . Students discuss how the products are similar.

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 "Represent and Compare Decimals 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 Procedure and Facilitation Points include questions to guide the discussion, such as, "How can we use the model and fraction and decimal representations to help us write our decimal in word form?" Sample responses support the teacher in guiding the discussion.
- The materials support teachers in guiding students to share and reflect on their problem-solving approaches, arguments, and justifications. For example, in the "Multiply Decimals Accessing Prior Knowledge" activity, students read the information on the "Slideshow" and decide which student statement best describes the solution to the problem. A facilitation tip guides the teacher to allow time for students to share their justifications with others who made the same choice. Students create a justification that represents the thoughts of the group. After sharing justifications, students may choose to change which group they agree with, and those who move to a different group explain why they changed their minds.
- "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 "Numerical Expressions Decide and Defend" requires students to decide which numerical expressions represent how much a girl will pay if she orders six books and to defend their thinking. Procedure and Facilitations, point 6, guides teachers to refer to the "Scaffolded Instruction Guide" in the "Home" tab of the scope to collect student data and differentiate instruction for each student.

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 to understand content. For example, in the Multiply Decimals scope Explore 1, students prepare meal kits by placing the correct weight inside each container using base ten blocks and writing the correct weight on labels using the numeral form and the number name. The facilitation tip prompts the teacher to use money as a relatable example for students who struggle.
- "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 Multiply Decimals Content Support states, "Students might think that multiplication always results in a larger quantity." Teacher guidance states that using visual models to multiply decimals can help students make better generalizations about the products of decimals.
- "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 "Balance a Budget" scope states students may confuse expenses with profit and vice versa. Teachers could solve this by asking students to calculate expenses and profit in real situations to help students understand the difference.