IMRA Review Cycle 2024 Report

Publisher Name	Program Name
Accelerate Learning	*STEMscopes Texas Math*
Subject	**Grade Level**
Mathematics	2

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 **1**

Indicator	Count of Flags
Alignment with Public Education's Constitutional Goal, 2.1.1	**1**
Promoting Sexual Risk Avoidance, 6.2	**0**

Alleged Factual Errors **0**

Public Feedback

Flags for Suitability Noncompliance **0**

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

Alleged Factual Errors **0**

Public Comments **0**

Quality Review Summary

Rubric Section	Quality Rating
1. Intentional Instructional Design	53 / 53
2. Progress Monitoring	28 / 28
3. Support 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

STEMscopes Texas Math is a Mathematics K–5 program. The materials promotes 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 real-life examples of mathematical concepts through hands-on activities, online games, and mathematical vocabulary building with pictures and Spanish cognates. Additionally, the program includes diverse learner supports with resources in both English and Spanish.

Campus and district instructional leaders should consider the following:

- Instructional guidance is provided to teachers within the program through instructional and content videos, how-to videos for accessing components in the program, and a Teacher Toolbox with information and materials for beginning teachers to master teachers. The product includes specific resources and guidance to support students with disabilities, emergent bilingual students, and gifted and talented students with videos and guides for implementing instruction, a Scaffolded Instruction Guide, Content Support, and Language Connections for each lesson and

unit, an Intervention section and Acceleration section with activities and support, as well as instructional resources in Spanish and as editable Google files for educators to add, delete items to suit individual student needs.

- This program fosters teacher collaboration within their grade levels and across their campuses, facilitating vertical planning with administrators, academic coaches, and district personnel. This alignment supports productive professional learning communities (PLCs) at every level, whether within a grade, campus, or district.

Intentional Instructional Design

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

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

Evidence includes, but is not limited to:

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

- The Teacher Toolbox provides a scope and sequence for the mathematical concepts, knowledge, and skills taught in unit lessons.
- The Scope and Sequence chart includes TEKS covered in each Scope (Unit), Explores (concepts), and the Standards (including the Process Standards and ELPS) alignment.
- Within the Scope and Sequence document, educators find guidance in planning learning experiences based on student's current developmental levels and a pacing guide for planning with their school's calendar.

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).

- In the Teacher Toolbox, the program provides a scope and sequence that includes suggested pacing in the form of instructional days to support effective implementation based on a typical 180-day calendar, a 165-day calendar, and a 210-day calendar.
- On the Curriculum Design landing page, the publisher includes directions for changing the scope and sequence to fit the needs of students and the instructional calendar.
- Further guidance on adjusting the scope and sequence is found in the Implementation Guide under the heading "Administration and Instructional Coaches Support'', section title "Various Instructional Calendar Options." For example, "To modify for varying amounts of instructional days, activities can be added or removed...[for] an instructional calendar that consists of 165 days, suggestions include the following: Only teach using the essential activities that are highlighted on our lesson Planning Guides in the Teacher Toolbox...Set your pace according to the number of Explores included in the scope. Use Exit Tickets as well as Show What You Know as homework for each Explore completed instead of in-class assignments. Teachers can choose from the other activities based on the highest student needs." In an instructional calendar over 180 days, suggestions include the following, "Follow the suggested pacing in our lesson Planning Guides and Scope Calendars. Utilize the Intervention and Acceleration elements to help strengthen the understanding of the content. Use elements such as the Project-Based Tasks and Fluency Builders as collaborative extension activities."

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 an Implementation Guide, which outlines the components of the materials, the rationale for their order, and how concepts connect throughout the course.
- A Course Rationale is provided that explains the unit order and how concepts to be learned in each unit connect throughout the course. For example, the grade 2 Course Rationale states "grade 2 begins with the Represent Numbers to 1,200 scope which significantly extends the numerical horizon for students and challenges them to compose and decompose numbers in various ways. This scope is pivotal as it lays the groundwork for understanding place value and the base-ten system that is essential for developing flexible, accurate, and efficient strategies for addition and subtraction."
- A progression chart within the Course Rationale displays how major mathematical concepts are connected across and within the units and includes the TEKS and Connecting Standards. For example, the chart shows how the scope Represent Numbers to 1,200 incorporates the major mathematical topics Place Value and Properties of Operations, Addition and Subtraction, Multiplication and Division, and Mathematical Relationships, and where these topics are integrated into future scopes in grade 2.

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

- Teachers can find guidance in the "Implementation Guide," "Vertical Alignment Charts," and "STEMscopes Math Philosophy: Elementary" for a full course overview. Access is available for the STEMCoach in Action resource page with professional development opportunities to support students.
- A Lesson Internalization protocol on the Suggested Scope Calendars guides teachers in internalizing the unit (scope) as a whole and each individual lesson. Additionally, "A PLC Guide to Breaking Down Learning Standards" lists the learning standards and key components to help teachers plan unit or lesson-level activities. Also provided is "A PLC Guide to Breaking Down Learning Standards" download for teachers to list the learning standards and key components and for planning activities in the classroom for a lesson or unit.
- Each scope (unit) begins with defined protocols for teaching the unit and includes content support, content unwrapped, scope overview, manipulatives/materials needed, daily objectives, warm-ups, assessment options, and links to the daily detailed lesson plans.
- An independent practice section for each scope (unit) is tailored to student needs with guidance for activities and lessons for students at the masters, meets, and approaches levels. Activities and lessons are also provided for guided practice.

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

- The Math Implementation Guide in the Teacher Toolbox guides administrators and instructional coaches to support teacher implementation of the curriculum by providing a synopsis of each component available.
- The Implementation Guide in the Teacher Toolbox provides a rubric for administrators and instructional coaches to utilize as they complete classroom observations.
- A Materials List in the Teacher Toolbox lists all the materials and manipulatives needed for each grade level so administrators and instructional coaches can ensure teachers have the items necessary to implement the instructional materials as designed.

Intentional Instructional Design

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

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

Evidence includes, but is not limited to:

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

- The Content Support in the Home section provides the trajectory or vertical alignment for the unit, the concept introduction, and coherence. The current scope builds the foundation for later grade levels.
- The Content Support page provides a comprehensive overview of the scope including background knowledge on the concepts, strategies, and academic vocabulary. For example, In the grade 2 Add and Subtract Three-Digit Numbers scope, the Content Support includes background knowledge, "In first grade, students utilized objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20."
- The materials include a "How to Use STEMScopes Texas Math" divided into five topic areas:
    - The Engage section includes Accessing Prior Knowledge, Foundation Builder, and Hook to support learning.
    - The Explore section includes Virtual Manipulatives, Explore Activities, and Skill Basics for grades K–5.
    - The Explain section includes various vocabulary strategies, including Interactive Notebooks, Picture Vocabulary, and Anchor Charts.
    - The Elaborate section includes Spiraled Review, Problem-Based Tasks, and Life and Career Connections.
    - The Evaluate section includes Observation Checklists, Skills Quizzes, Heat Maps, and Technology- Enhanced Questions.

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

- Teachers use a template in English and Spanish that gives families a brief overview of the curriculum, publisher's philosophy, and materials used to support learning.
- The material includes a Take-Home Letter in English and Spanish for each scope (unit). The letter also includes an overview of the scope, the goal of the unit, academic vocabulary specific to the scope, suggestions for activities to try at home to support their student's learning in the classroom, and how families access the teacher for support. For example, in the grade 2 scope on Represent Numbers to 1,200, the Take-Home Letter explains, "Your student is about to explore representing numbers up to 1,200. To master this skill, your student will build on their knowledge of representing numbers up to 120. As your student extends their knowledge of this concept throughout second grade, they will learn the following concepts..."
- Student Goal Setting sheets in English and Spanish provide a data tracking tool for students to monitor progress in the classroom, use an "I can" statement for each scope, and share information with families.
- The material includes a "Try This at Home" page in both English and Spanish for each scope (unit). For example, the grade 2 data analysis "Tic-Tac-Toe: Try This at Home" has eight choices including a sticker chart, name game, candy count, and family and friends' favorites.

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.

- The beginning of each scope contains a landing page with Student Expectations (TEKS), Key Concepts, Fundamental Questions for the teacher, and a task for students to complete to assess their knowledge before applying the skill to the concept. Each lesson plan includes the following: a description of the lesson; mathematical process standards taught; materials to print, which are available in English and Spanish; all reusable components used by students; teacher preparation steps before beginning the lesson; procedure and facilitation points during the lesson; a "Math Chat" with teacher-led questions of varying depth of knowledge categories along with possible student answers; a post-explore section for closing the lesson; an exit ticket; a list of instructional supports for students; a list of language supports with the ELPS listed for reference.
- The Instructional Supports in each scope provide options for the teacher with students who need extra support. For example, in the grade 2 Area scope, Explore 1 – Cover Rectangles with Squares, "As an extension, you could encourage the students to come up with an idea of what other objects could be measured with square tiles. If time allows, let them use their tiles to cover other rectangles around the room."

- The Language Supports section in the activities includes tasks and questions designed to develop language and directly align with the ELPS. For example, in grade 2 Explore 1, Activity for Represent Numbers to 1,200, suggestions include, "Provide word walls and anchor charts depicting the words hundreds, tens, and ones. Students may use these to self-monitor as they are responding to questions or talking with their groups. Model responses for students to repeat. When asking about the number of seeds at each station, point to the groups of hundreds, tens, or ones. Prompt students to say, "There are ___ hundreds, ___ tens, and ___ ones. This equals ___ seeds."
- In the Evaluate tab of the scope, includes various assessments, which include an observation checklist, open-ended assessments, a standards-based assessment, skills quizzes, a heat map for students to track their assessment results and create personalized improvement plans, and technology-enhanced questions. The assessments are available in Spanish and English and align with the lesson's content and language standards of the unit (scope).

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

- The Suggested Scope Calendar in the Home tab for each scope provides recommendations for the required time for each lesson component (warm-up, whole group, small group, and assessment). The suggested timing for each component varies from lesson to lesson. For example, in the grade 2 Personal Financial Literacy Scope, the timing for the whole group lesson on Day 1 is less than 15 minutes, while on Day 2, it is 45–60 minutes. The suggested time for small groups on Day 1 is 30–45 minutes and 15–30 minutes on Day 2.
- In the scope, teachers use the "Home" drop-down to access various items related to the scope that includes a Scope Overview for a "macro view of all the 5E + IA elements available in a scope," a Suggested Scope Calendar with planning for lesson internalization and lesson overviews for the time allotted for each part of the lesson by day. For example, in a grade 2 scope for Compare and Order Numbers Day 2 lesson overview, the recommended timings are "Warm-Up 5–10 minutes, Whole Group 45–60 minutes, Small Group 15–30 minutes, Assessment Options 5–15 minutes."
- The Suggested Scope Calendar offers practice sessions divided by student mastery level with times for individual practice.

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

- Each scope includes a lesson overview listing the necessary files to download or print for teachers and students (available in both English and Spanish). For example, in the grade 2 Add and Subtract Three-Digit Numbers scope, Explore 2 - Subtraction Strategies lesson, the list of materials required for the lesson is: "1 student journal (per student), set of match cards, 1 exit ticket (per student), and 1 resealable bag (per group)."
- Within each scope, teachers use the Explore drop-down to access the individual lessons of the scope. The lessons include a lesson description, a list of Mathematical Process Standards

in the lesson, printable and reusable materials for the teachers and students, and how to prepare for the lesson.

- The Preparation section provides student support materials and technology. For example, in the grade 2 Numbers on a Number Line scope, Explore 2 - Points on a Number Line, the Preparation section states, "Plan to have students work in pairs to complete this activity. Print a set of Number Lines and hang them at stations around the classroom for students to rotate through. Print the Student Journal and Exit Ticket for each student. For students who need more support in recalling information, please see our Assorted Number Lines and 1–120 Number Chart Supplemental Aids elements in the Intervention section. Go Digital! Have students explore or present their solutions using virtual manipulatives! The manipulatives used in this lesson can be found in the Explore drop-down menu and can be digitally assigned to students. (Number Lines)."

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

- The Suggested Scope Calendar includes guidance on using lesson materials and time effectively, based on the student's mastery of the lesson objectives (approaches, meets, masters). For example, in a grade 2 scope for Numbers on a Number Line, a student who demonstrates mastery utilizes the Acceleration section and one of the following (available in English and Spanish) during small group or independent time: "Math Today (15–30 minutes), Acceleration–Connection Station (15–30 minutes), Acceleration–Choice Board (15–30 minutes)."
- The scope-specific "Take-Home Letter" gives families student homework information, explains the unit and suggestions for supporting students at home, and contains a "Tic-Tac-Toe: Try This at Home" choice board where students and their families select activities to complete.
- Every scope in the grade 2 materials has an Acceleration tab, which includes a student choice board for extension activities. For example, the Personal Financial Literacy scope choice board includes options that connect the scope to home, social studies, vocabulary, the real world, writing, and life. Further extension activities for the whole class or small groups at the mastery level are in the Elaborate tab and include spiraled reviews, problem-based tasks, and life connections related to the scope.
- A materials list, supplemental aids, a teacher observation checklist, a check-up activity, and guiding questions are in the Intervention tab.

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.

- The materials contain a diagnostic assessment used three times per year. Teachers use the Pre-Assessment at the beginning of the year "to evaluate students on standards they have already learned. This means the Pre-Assessment will assess the standards from the previous grade level." Teachers use the Mid-Assessment in the middle of the year to "assess a mixture of grade-level and previous grade-level standards." At the end of the year, teachers use the Post-Assessment to "evaluate all grade-level standards and can be used as a predictor of student performance on state tests." The assessments are available as multiple-choice questions with a recommendation "that Kindergarten and 1st-grade assessments be administered as paper-pencil and read aloud by the teacher." The materials contain a "Quantile® measure... for grades 2–5." The materials include a scope (unit) specific diagnostic assessment at the beginning of each scope in the Suggested Scope Calendar. The diagnostic or Pre-Assessment is "a quick probing activity that identifies the students' level before beginning each scope and usually takes less than 15 minutes." For example, in a grade 2 scope for comparing and ordering numbers, the Pre-Assessment or diagnostic assessment has students comparing numbers with symbols and words. Teachers "Facilitate a class

discussion about their comparisons. This provides an opportunity to gather an understanding of prior student knowledge before beginning the lessons. Encourage students to support their answers and check for understanding and misconceptions. Ask the following discussion questions: What does each comparison symbol mean? How do you know this number is less than/greater than this number? Can you write a different comparison statement using the same numbers?" After the assessment, "If the students struggle with this task, [teachers will] do the Foundation Builder to fill the gap in prior knowledge before moving on to other parts of the scope." Materials include Standards-Based Assessments, described as "Students demonstrate mastery of the key concepts and skills in the scope through a standards-based summative assessment." Question types include eight multiple choice, one fill-in-the-blank, and one short response. Suggestions in the Tips and Tricks provide opportunities for teachers to use an Assessment Bank to build a customized assessment.

- Summative assessments at the end of each scope test mastery of the scope's concepts in various tasks and questions, such as Skills Quizzes, Standards-Based Assessments, Decide and Defend, Technology-Enhanced Questions, and Benchmark Assessments. The Decide and Defend assessment contains a rubric and can be used as a diagnostic or summative assessment completed individually or in pairs using manipulatives. The Decide and Defend assessment "can prepare students for open-ended test questions." For example, in grade 2, Represent Numbers to 1,200, the assessment asks, "Maria writes a 3-digit number using the digits 4, 7, and 3. She wants to make the largest number possible using these three digits. What number would be the largest possible number using 4, 7, and 3? Draw and label a picture using base ten blocks that show your thinking." Technology-Enhanced Questions provide online assessments to mimic state standardized testing (STAAR) by using multiple Technology-Enhanced Question Types. The Technology-Enhanced Questions "allow students to answer question types that are not possible in a paper-and-pencil format," for example, "Multiple Answer, Sequence, Griddable, Fill-in-the-Blank, Sorting, and Bar Graph."
- The materials provide a variety of formative assessments found throughout each scope and lesson in Structured Conversations, Exit Tickets, Show What You Know, Decide and Defend, Observation Checklist, Skills Quiz, Mathematical Modeling Task, Skill Reviews, Practice Quick Checks, and Small Group Intervention Checkups and Quick Checks. For example, in a grade 2 scope for Compare and Order Numbers, students complete an Exit Ticket at the end of the Explore 1 activity, "Complete the tables by writing the numbers and drawing pictorial models." At the end of the Explore, or lesson, teachers "invite the students to a Math Chat to [verbally] share their observations and learning" with varying DOK-level questions. Each scope provides an Observation Checklist for teachers to take anecdotal notes of students' progress during the scope (unit) and lesson.

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

- The Implementation Guide includes teacher guidance in defining instructional assessments and the purpose of the instructional assessments for each scope. "Each assessment is carefully aligned with the TEKS and can be used to gather data to inform instruction." The section titled "Outside of the Scope Assessments" states, "The data collected from these

assessments can be used to ensure that students are on track or determine if interventions or adjustments in instruction are necessary." The benchmark assessments for each grade level, from Kindergarten through Algebra I, include pre-, mid-, and post-assessments. Growth Measurement Assessments "are designed to track the growth of on-grade level standards from the beginning of the year to the end of the year."

- Further guidance on instructional assessments for each scope is in the Assessments section in the Suggested Scope Calendar, which lists the variety of assessments available in that scope and the purpose for each. For example, in a grade 2 scope for Numbers on a Number Line, the materials list a Small-Group Intervention-Checkup, a formative assessment, and explain it is "an independent practice assignment to assess student mastery of the content after small-group intervention."
- Each grade 2 scope has an Evaluate tab listing several instructional assessments. An Observation Checklist "provides a breakdown of the key concepts and skills in the scope. It can be used as a formative assessment for teachers and as a self-assessment for students." Decide and Defend assessments have "students reason mathematically and support their ideas with evidence using an open-ended assessment." The Standards-Based assessment has "students demonstrate mastery of the key concepts and skills in the scope through a standards-based summative assessment." The "Skills Quiz is a short, standards-based formative assessment to determine student mathematical fluency with the key concepts and skills in the scope." Technology-Enhanced questions are an assessment type "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." After utilizing an assessment, students use the Heat Map to "analyze their assessment results and determine what they did well and where they can improve."

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

- The materials provide teacher guidance to ensure consistent and accurate use of the assessments found within each scope. Each Observation Checklist includes Procedures and Facilitation points for teachers. In the grade 2 Data Analysis scope, procedure 2 says, "As students are working through the Explore and Explain activities in the scope, formatively assess their progress by taking anecdotal notes on how key concepts and skills were observed. Reflection questions can be considered to measure the impact of both whole-group and small-group activities." The last procedure refers teachers to the Scaffolded Instruction Guide in the Home section to support and differentiate for all students.
- The materials include the Description, Materials Required, Preparation, Procedure and Facilitation Points, and Tips and Tricks for the Skills Quiz found in each scope. In the grade 2 Data Analysis scope, there are three points to consider for preparation: "Print a Student Handout for each student. The Student Handout can also be assigned digitally. Allow students to use manipulatives by request. Prepare Supplemental Aids for students who meet eligibility criteria." The last step in the Procedure and Facilitation Points refers teachers to the

Scaffolded Instruction Guide in the Home section to support and differentiate for all students "once student data has been collected after the assessment."

- A Procedure and Facilitation Points section for the Decide and Defend assessment provides teachers with step-by-step directions to administer the assessment and use the rubric. For example, the Decide and Defend assessment for the grade 2 scope for Data Analysis states, "1. Distribute a Student Handout to each student. 2. Allow time for students to read the scenario, record their responses, and justify their reasoning. 3. Use the rubric to review students' responses to determine mastery of math concepts. 4. Review the rubric with students to discuss strengths and areas for improvement. 5. Ask students to share their ideas with the class and discuss any misconceptions. 6. Once student data has been collected after the assessment, refer to the Scaffolded Instruction Guide in the Home section of this scope to differentiate instruction for each student." In the Tips and Tricks section for this assessment, teachers will "review the rubric with students before the assessment to clarify expectations for students' responses."

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

- The materials include benchmark assessments given three times per year, beginning of the year, middle of the year, and end of the year. "Each assessment provides meaningful data that can be used to inform instruction in the classroom. Each assessment intends to evaluate students on standards they have already learned." The Pre-Assessment benchmark assesses students' previous grade-level standards, the Mid-Assessment benchmark assesses a mixture of grade-level and prior grade-level standards, and the Post-Assessment benchmark assesses current grade-level standards to check for mastery. These assessments align with the TEKS, Mathematical Process Standards, and the objectives for the course at each point of the benchmark.
- The diagnostic or Pre-Assessment for each scope provides insight into the student's readiness for the upcoming TEKS and objectives. For example, in the grade 2 scope for Represent Numbers to 1,200, the diagnostic assessment tests for students to compose and decompose numbers up to 120 in more than one way using linking cubes and a Place Value Chart. The TEKS and objectives for this scope are 2.2A, 2.2B, and 2.7A and explain, "Students compose and decompose numbers up to 1,200 by showing sums of thousands, hundreds, tens, and ones by using both concrete and pictorial models. They represent numbers up to 1,200 in three forms: standard form, word form, and expanded form. Students also explore even and odd numbers up to 40."
- The Observation Checklist, a formative assessment, in the grade 2 scope for Represent Numbers to 1,200, provides a detailed rubric to use when taking anecdotal notes for each student during the specific scope and lists the TEKS and process standards covered within the scope.
- Materials list the TEKS under the Home tab in the Student Expectation section. For example, in the grade 2 Area Scope, "Student Expectations: 2.9F Use concrete models of square units to find the area of a rectangle by covering it with no gaps or overlaps, counting to find the total

number of square units, and describing the measurement using a number and the unit. Connecting Standards: 2.9A Find the length of objects using concrete models for standard units of length." The answer keys have the depth of knowledge level listed. Assessments provide TEKS-aligned questions. For example, the formative assessment Skills Quiz for the grade 2 Area scope requires students to "Find the area of the rectangles. Use unit squares if needed" as defined by TEKS 2.9F.

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

- The Teacher Toolbox contains Lesson Planning Resources under the Essentials tab, which includes a Depth of Knowledge document of activities at varying levels of complexity that guides teachers to activities to "naturally transition students from Level 1 to Level 4, expanding their thinking and deepening their knowledge and skills." Technology-Enhanced Questions are assessments modeled after state standardized testing that offer "computer-based questions [in] formats that allow for non-conventional question types, including multiple answer, sequence, Griddable, fill-in-the-blank, sorting, and bar graph." Teachers and students can use other assessments for one-on-one testing opportunities, enabling dialogue and clarification.
- The materials for each scope include multiple formative and summative assessments that provide various response options, including multiple-choice, open responses, and text entry. For example, in the grade 2 scope for Compare and Order Numbers, the Explore 2 Exit Ticket has students "Compare and Order Numbers using symbols and placing them in order from least to greatest and greatest to least" using text entry, and the Standards-Based Assessment for the scope utilizes multiple-choice questions.
- The materials for each scope include multiple formative and summative assessments that provide various response options, including multiple-choice, open responses, and text entry. For example, in the grade 2 Data Analysis scope, Explore 1: Organize Data Using Pictographs, the Check for Understanding includes questions at the depth of knowledge (DOK) level 1 and 2. The grade 2 Area scope Explore 1 Cover Rectangles with Squares provides a Math Chat opportunity composed of two DOK level 2, one DOK level 3, and one DOK level 4 questions with suggested student responses.
- Materials provide opportunities to move between levels of complexity; for example, in grade 2 Area scope Explore 1: Cover Rectangles with Squares, the Math Chat includes a DOK level 3 question, "How do you know if a number is greater than or less than another number?" followed by a DOK level 2 question, "What happens if you add ten to a number with a 9 in the tens place?" before ending with a DOK level 4 question, "When would you need to generate numbers greater than or less than a given number outside of school?"

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 include standards-aligned items at varying levels of complexity. 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 Differentiation Pathway found in the Teachers Toolbox guides teachers on how to respond to different levels of mastery for each student during Independent Practice and Guided Practice. For example, if the student is "Approaching (below 70%) - Some knowledge of the content but doesn't show an understanding of the important concepts; needs extra support and intervention. Approaching - If students have some knowledge of the content, then they can gain an understanding of the important concepts using the following elements: Interactive Practice and Picture Vocabulary."
- Each scope provides an Observation Checklist and lists the standards (TEKS). Teachers have space in the Observation Checklist to interpret and collect needed information to internalize the next steps. The Observation Checklist includes reflection questions. For example, "Is this student proficient in the skills addressed in this scope? If so, what is next for them? If not, how can I support them?" and "What activities worked well for this student, and what would I do differently next time?"
- The materials include reference materials for teachers to differentiate instruction based on student performance. For example, teachers use the Scaffolded Instruction Guide in the Home tab to differentiate instruction for each student based on performance data from the grade 2 Data Analysis scope Decide and Defend assessment. For teachers using standards-based grading material, suggest taking "anecdotal notes provided on the Teacher Handout" to collect documentation.
- The materials provide opportunities for students to reflect on strengths, weaknesses, learning gaps, and common misconceptions (preconceptions). For example, in the grade 2 scope for Numbers on a Number Line, the Observation Checklist in the Evaluate tab asks teachers to

answer the following questions: "Is this student proficient in the skills addressed in this scope? If so, what is next for them? If not, how can I support them?" The listed Misconceptions and Obstacles in the Content Support states, "Students may count the tick marks rather than the spaces when using a number line. Students may be confused about the value the tick marks represent between numbers. Students may be confused about the value the tick marks represent when the number line does not begin at zero. Students may struggle to place numbers in reasonable locations on an open number line that has no tick marks or intervals."

- In the Engage section of each scope, a lesson plan for accessing prior knowledge is available that includes Description, Materials, Preparation, and Procedure and Facilitation points. In the Data Analysis scope for grade 2, the last Procedure and Facilitation point states, "If students are struggling to complete this task, do the Foundation Builder to fill the gap in prior knowledge before moving on to other parts of the scope."
- The materials guide how to respond to students' performance on assessments. For example, in the grade 2 scope for Numbers on a Number Line, in the Practice section under the Suggested Scope Calendar, the materials guide the teacher to use the following practice activities if a student is at the master level of proficiency, "Acceleration-Math Today (15–30 minutes), Acceleration-Connection Station (15–30 minutes), Acceleration-Choice Board (15–30 minutes)."

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

- Based on how students perform on assessments, the materials include practice for all students and individualized practice at the masters, meets, and approaches levels. The masters-level students have suggested acceleration practice. In the grade 2 Data Analysis scope, Practice suggestions in the Elaborate tab for students who meet grade-level proficiency include "Math Story (30–45 minutes), Problem-Based Task (30–45 minutes), and Fluency Builder (15–30 minutes)."
- Following Explore 1 in the grade 2 Personal Financial Literacy scope, the materials include instructional and language supports to guide the teacher's response to students' performance on the Exit Ticket and throughout the Explore. For example, "Consider printing the Picture Vocabulary slides for the words income, goods, and services and hanging them at the front of the room for students to reference throughout the lesson." Materials suggest the teacher "refer to the Scaffolded Instruction Guide found in the Home section to provide extension or additional support."
- The Instructional Support section within each Explore Activity in the teacher materials guides how to respond to students needing additional support based on the formative assessments. For example, in grade 2 Represent Numbers to 1,200 scope, Explore 3, one suggestion states, "If students need additional support composing and decomposing place values, use base ten blocks to model it. For example, you could give a student 14 unit blocks and have the student trade in 10 unit cubes for a rod. If necessary, have the student line up 10 unit blocks next to a rod to show the student they are equivalent. Some students may need support making 1,000. Use base ten blocks to show them how to regroup 10 groups of 100 to make 1,000. Have them

build a thousand blocks by taking 10 hundreds and placing them together to form a cube. They could also make a note of the thousands placed on their Place Value Charts that say, '10 groups of 100'." The Heat Map directions guide the teacher to provide time "for discussion as students analyze the results of their assessment."

- The Scaffolded Instruction Guide assists teachers in planning for the next steps. A chart for teachers provides a guide broken into four percentile ranges to assist teachers in the next steps. For example, if a grade 2 student scores in the 25–50 percentile, the teacher may choose from multiple lessons such as Small-Group Intervention Parts 1, 2, and 3, Fluency Builder, Interactive Practice, or Skill Basics. Materials also provide Small-Group Intervention ideas. Every scope includes a Small-Group Intervention section for teachers with tasks and activities in response to trends in student assessment performance. For example, in the grade 2 Data Analysis scope, the Small-Group Intervention comes with a Teacher Checklist document that allows teachers to internalize and plan small-group activities based on the needs of the students.

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

- Each scope includes an Observation Checklist for teachers and students to track learning and assessment trends. The student Observation Checklist allows students to reflect on their learning by scoring themselves between 1 and 5 stars for their understanding of the objectives and standards.
- The materials include self-reflection strategies in a formative setting. For example, in the grade 2 Addition and Subtraction Problem-Solving scope Observation Checklist, one of the Procedure and Facilitation points says, "Students can reflect on their thinking, learning, and work in the scope; identify ways they have improved; and establish new learning goals." The student handout for the Observation Checklist asks students to rate themselves with a thumbs up, "I've got it!"; thumbs sideways, "Almost there!"; or a thumbs down, "Not yet!"
- The materials include a Heat Map where students track their scores on assessments. Instructions provide teachers with steps for completion. A student-friendly coding system is in place. For example, "Students use their graded assessment(s) to color-code the Heat Map. For each question answered correctly, students color the corresponding box green. For each question answered incorrectly, students color the corresponding box red." For example, the grade 2 Addition and Subtraction problem-solving scope Heat Map directions state, "Refer to your answers on the Skills Quiz. Next to each standard, color the question box green if your answer is correct. Color the question box red if your answer is incorrect." The Heat Map provides for discussion as students analyze their assessment results. "Students analyze their assessment results and determine what they did well and where they can improve." Teacher directions state, "Encourage students to look for patterns in their data, such as a standard that was missed more frequently or a standard they have clearly mastered, and use this information to reflect and set goals in the provided table." The student completes the Reflection by analyzing and completing the table with two columns: "I think I did well on" and "I need to work on." The materials provide student-friendly assessment trackers and reflection tools in both English and Spanish.

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.

- Under the "Intervention" Tab, the materials in every scope provide differentiated instruction and activities for teachers to use with students still struggling with understanding the standards and objectives. For example, in the grade 2 Representative Numbers to 1,200 scope, the "Small Group Intervention" incorporates multiple activities and differentiated instruction using supplemental aids as needed, an egg carton, and counters to practice representing numbers. The lesson instructs the teacher, "Before the activity, ask students to tell you everything they know about representing numbers up to 1,200. As students answer, check to see whether they understand the order of place value and how a digit's value is determined by its place value. Identify student misconceptions." Additionally, before each scope, the materials suggest teachers use a pre-assessment or diagnostic assessment to help determine the student's level of understanding. The materials guide teachers in using the "Foundation Builder'' activity to scaffold the learning. The materials guide teachers to use the "Foundation Builder" activity to scaffold the learning. For example, in the grade 2 scope, "Compare and Order Numbers," students build the numbers using base ten blocks before comparing them. The materials include small-group intervention plans with question stems to guide the teacher in differentiated instruction after the lesson.
- The "Suggested Scope Calendar" contains the recommended practice for students who have not yet reached proficiency. For example, in the grade 2 "Data Analysis" scope, students

approaching grade-level proficiency have differentiated activities to ensure mastery. The materials recommend students complete the interactive practice for 15–30 minutes and the skills quiz for 30–45 minutes. The Guided Practice includes intervention for 15–20 minutes and "Language Connections" for 15–30 minutes if needed. The materials include the Scaffolded Instruction Guide in the "Home" tab for each scope. "The Scaffolded Instruction Guide is provided so teachers can plan for the next steps based on the MAP Growth assessment data." For students who have not yet reached proficiency on grade-level content and skills, teachers pull activities in the first two percentile ranges, 0–25th percentile, previous grade-level remediation, and 25th–50th percentile, on grade level with support. The materials include specific recommendations for differentiated groups to support students who have not yet reached proficiency on grade-level content and skills. The materials include embedded reteaching components in the previously taught concepts that are explicitly reviewed and retaught for students who have not mastered the previous lesson objective or multiple objectives. For example, the Scaffolded Instruction Guide in the grade 2 "Length" scope provides a five-part plan that includes discussion questions used to facilitate student discourse for those scoring at the 50th to 80th percentile.

- In the section "Instructional Supports" found on every "Explore" activity, teachers receive guidance for differentiated instruction and activities for students who struggle with the grade-level concept(s) for each lesson. For example, in a grade 2 scope for "Represent Numbers to 1,200," the "Instructional Supports" state, "If students need additional support representing the number of seeds, encourage them to draw a circle or oval as a group and label it with the number of seeds that group contains. Students could draw groups of 10 and 100 seeds." The materials guide teachers in using a variety of instructional modalities, such as visuals and manipulatives, to support those who have yet to reach proficiency in grade-level skills. For example, the Scaffolded Instruction Guide in grade 2 "Length" scope materials provides "Picture Vocabulary" cards showing the vocabulary and a visual.

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

- In the "Explain" tab for each scope, the materials provide instruction for pre-teaching vocabulary used throughout the "Explore" lessons. For example, in the grade 2 scope for "Compare and Order Numbers," the "Picture Vocabulary" activity under the "Explain" tab explains, "Students build academic vocabulary and connect vocabulary to their experiences. This element is meant to be used in tandem with Explores." The materials include teaching academic vocabulary and symbols through hands-on experiences, manipulatives, and visuals. For example, Picture Vocabulary, featured as an editable Google File, presents words with visuals in both English and Spanish to use as part of the pre-teach and vocabulary review.
- The "Home" tab of each scope includes a "Content Support" section to assist teachers in pre-teaching unfamiliar vocabulary and references. For example, the "Terms to Know" in the "Content Support" section for the grade 2 Data Analysis scope lists necessary terms and their definitions. The materials include Content Unwrapped in the "Home" tab for each scope. For example, the grade 2 "Data Analysis" scope lists the concrete words students should know (the nouns of the TEKS) with their definitions. The Content Unwrapped for each scope also

lists "Implications for Instruction." For example, in the grade 2 "Data Analysis" scope, the "Implications for Instruction" states, "To draw students' attention to the parts of a graph such as the title, category labels, and key/scale, an explicit strategy can be taught to show students how to attend to the parts before answering questions about the data. Many questions can be answered using the different parts of the graph. The key or scale is most important in this scope when creating pictographs and bar graphs with intervals of one or more."

- The materials provide guidance for pre-teaching unfamiliar vocabulary and references before each scenario for the "Explore" activity, with frequent structured opportunities for students to talk with partners and groups using academic language and vocabulary. For example, in a grade 2 scope for "Compare and Order Numbers," the "Procedure and Facilitation Points" guide the teacher to have the following conversation with the students at the beginning of the "Explore" activity, "1. Read the following scenario to the class: The local electronics store is creating a new ad for the week. The owners want the original price of the item displayed, but they also want to show customers the discounted price and the price a local competitor is offering for the same item. The store needs our help finding those two prices so they can be added to the store ad. Can we help the electronics store identify those prices? 2. Help students access the task by asking the following guiding questions: a. Do you enjoy shopping for electronics? b. What do you picture in your mind when you think of an electronics store? c. What does a store ad look like? d. What do you recall when it comes to generating numbers more or less than a given number?"

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

- The materials include a "Suggested Scope Calendar," which recommends practices to enable students to showcase proficiency in grade-level content. For example, in grade 2 "Data Analysis" scope, students that meet grade-level proficiency and master grade-level proficiency have differentiated activities, e.g., "Math Story," "Problem-Based Task," "Fluency Builder," "Math Today," "Connection Station," "Choice Board," that also contains level specific guidance. Additionally, the "Suggested Scope Calendar" provides daily lessons broken into the "5E" phases (engage, explore, explain, elaborate, and evaluate). Under "Independent/Guided Practice," the materials instruct teachers to choose a task based on the student's level from a list of activities in the "Practice" section provided at the end of the lesson.
- The "Explore" activities contain an "Instructional Supports" section that offers teacher guidance for differentiating instruction for students showing proficiency in the grade-level content. For example, in a grade 2 scope for "Numbers on a Number Line," the "Instructional Supports" in "Explore 2" guides teachers as follows, "As an extension, have students create their own number line with a missing number. Encourage them to have the number line increase by 2s, 5s, or 10s. Have them share their number line with a partner." Each scope (unit) culminates with an enrichment or extension activity, such as project-based learning, a research project, or a creative project that synthesizes content and student learning. For example, the grade 2 "Area" scope provides a differentiated extension, "Problem-Based Tasks - Park Planner," where students "work collaboratively to apply the knowledge and skills they have learned to an open-ended, real-world challenge."

- The materials include a Scaffolded Instruction Guide in the Home tab for each scope. "The Scaffolded Instruction Guide is provided so teachers can plan for the next steps based on the MAP Growth assessment data." For students showing proficiency in grade-level content and skills, teachers pull activities in the last two percentile ranges, 50th–80th percentile, at grade level, and 80th–100th percentile, extending grade level. The Supplemental Activities document in the Scope Overview provides a list of extension activities for teachers to use for students who meet or master the concepts and objectives for each scope. For example, the extension activities available for grade 2 are "Life Connections" (Elaborate), "Math Today" (Acceleration), "Connection Station" (Acceleration), and "Choice Board" (Acceleration).

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).

- At the bottom of each Explore activity, the Instructional Supports provide guidance, prompts, and possible student answers when modeling, explaining, and communicating the Explore's concepts and objectives. The Procedure and Facilitation sections support the teacher in modeling, explaining, and communicating the concepts directly and explicitly. For example, in the grade 2 Represent Numbers to 1,200 scope, Explore 2: Count Organized Collections within 1,000 the Instructional Supports state, "If students need additional support with decomposing numbers a different way, discuss what they drew in the first pictorial model and demonstrate how to regroup those numbers differently using a think-aloud strategy." Additionally, materials provide clear, step-by-step directions to guide the teacher in explaining and communicating the concepts, including questions at various DOK levels.
- The materials provide guidance for the use of tasks and activities throughout each unit in the margins of the teacher edition. For example, the Teacher Guide in the Scope Overview in the Procedure and Facilitation section states, "If students are struggling to complete this task, do the Foundation Builder to fill the gap in prior knowledge before moving on to other parts of the scope." The Procedure and Facilitation section includes the 5 E's for every scope in their tab: Engage, Explore, Explain, Elaborate, and Evaluate with explicit instructions for each tab. This section also includes guidance to support the teacher in modeling, communicating, and explaining the concept(s) to be learned explicitly (directly) for each of the 5 E's.
- Procedure and Facilitation sections include prompts and guidance to support the teacher in modeling, explaining, and communicating the concepts directly and explicitly. In the grade 2

Personal Financial Literacy scope, Explore 1 has guidance and prompts such as, "Help students access the task by asking the following guiding questions: a. What chores are you responsible for at home? b. Do you earn an allowance for those chores? c. What do you already know about saving and spending money?"

- The Math Chat at the bottom of each grade 2 Explore activity provides guidance, prompts, and possible student answers when explaining and communicating the Explore's concepts and objectives. For example, in the grade 2 scope Compare and Order Numbers, Explore 1: Generate Numbers Greater Than or Less Than the Math Chat includes the following guidance and prompts: "11. After the Explore, invite the class to a Math Chat to share their observations and learning. [Teacher] 1. DOK-3 When you add to the tens/hundreds place or take away from the tens/hundreds place, what digit changes? Why? [Student] The tens/hundreds place will change because you are adding or taking away tens/hundreds. The digit will increase or decrease. [Teacher] 2. DOK-3 How do you know if a number is greater than or less than another number? [Student] You start at the place value farthest to the left. If the numbers both have digits in the same place value, the largest digit will be the greater number. If one number has a digit in a place value that is greater than the other number, then it is the larger number."

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

- In each activity, the Procedure and Facilitation section includes teacher guidance and recommendations for effective lesson facilitation that engages students in problem-solving, reasoning, and sense-making. Teacher guidance and recommendations provide effective lesson delivery and facilitation through a variety of instructional approaches. For example, the Procedure and Facilitation Points in the grade 2 Area scope in the Explore tab (Skill Basics) provide clear, concise, step-by-step directions to facilitate the lesson and questions of varying DOK levels with sample student responses to mitigate confusion. In this example, the materials suggest using materials such as 30 square-inch tile manipulatives, one sticky note, one large book, and one piece of construction paper to provide a hands-on approach for students to learn about finding the area of an object. In addition, students explore Virtual Manipulatives digitally, and an available Color Tiles Tutorial video provides steps and modeling for using the virtual tiles.
- Teachers use a variety of instructional approaches, including discourse or writing strategies, such as My Math Thoughts, in the Explain tab of each scope. The description states, "Students have the opportunity to write out their mathematical thoughts and ideas using several avenues." The Show What You Know assignments in the Explain tab of each scope engage students in higher-level thinking to show their understanding of mathematics in writing. Available in print or electronic form, students complete the activity independently. In the grade 2 Personal Financial Literacy scope Show What You Know- Part 1, the last prompt for students asks, "Why is it important to save money?"
- The materials include Structured Conversations, mathematical discourse prompts, and conversation starters, in the Teacher Toolbox. The Structured Conversation contains an accountability rubric, guidelines, and structures for intentional discourse, and both suggest and define instructional routines, including Around the Room, Back and Forth; Conga Line;

Four Corners; Gallery Walk; Inside/Outside Circles, Pair, Square, Share, Think and Throw' Turn and Talk, and Walk, Talk, Decide.

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

- The Suggested Scope Calendar provides daily support for multiple types of practice (e.g., guided, independent, collaborative) for each scope. In the section Practice (Independent Practice and Guided Practice), a list of suggested practice options is based on student mastery (approaches, meets, masters, and everyone). Additionally, in the scope overview, the Teacher Guide provides clear headings and labels to support the teacher in effectively locating various types of differentiated practice (guided, independent, collaborative) used in the lesson structure.
- Listed in each scope lesson are the required materials for teachers to print, along with reusable and consumable materials to gather per student or pair of students. The Preparation section gives teachers guidance and recommendations for effective lesson delivery, and in grade 2, the Personal Financial Literacy scope, Explore 2: Deposits and Withdrawals, states, "plan to have students work in pairs to complete this activity." Throughout the Explore, teachers find guidance, such as allowing students to work in partners, check with partners, work in groups of 3 or 4, or complete as a class. The Preparation section gives teachers guidance and recommendations for effective lesson delivery. Teacher materials provide various options for students to apply the concepts learned. For example, the grade 2 Length scope offers whole group opportunities, such as the Hook- How Tall Am I? activity, providing a video and DOK questions to discuss their observations as a group. The small group activity Explore 3- Distance on a Number Line provides opportunities for students to work in groups of 3 or 4 to complete. Individual tasks in the scope include the completion of the student Interactive Notebook and Distance on a Number Line Exit Ticket, allowing students to show mastery of the concept.
- The Explore activities in each scope provide various options and resources for students to practice and apply the concepts learned, including whole group, small group, individual, and partners. For example, in the grade 2 scope for Represent Numbers to 1,200, the Explore 2 activity begins with students exploring six stations with a group before being brought back to a whole class discussion (Math Chat) to share strategies and check for understanding. Once they have completed the Explore activity, teachers use the Small Group Instruction for students to complete the Independent and/or Guided Practice and then finish the lesson with an Exit Ticket.

Supports for All Learners

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

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

Evidence includes, but is not limited to:

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

- Materials include integrated resources for teachers to support linguistic accommodations for various levels of language proficiency, such as sentence stems, graphic organizers, word banks, anchor charts, and student journals. In the Multilingual Learners tab of the Teacher Toolbox, the materials include Proficiency Levels by Domain, Working on Words (English and Spanish), and Sentence Stems (English and Spanish) as downloadable PDFs. The Proficiency Levels by Domain states, "When implementing proper scaffolding, students at a [beginner, intermediate, advanced] level can" listen, speak, read, write, and listen, at each proficiency level. In both English and Spanish, Working on Words is a thinking map to help students internalize new vocabulary, and Sentence Stems, both printed and posted, to encourage and support student usage.
- The materials include Language Connections that go with each scope. The description of the language connection is, "Students have the opportunity to use their linguistic and cultural

background knowledge to support connections to new skills, vocabulary, and concepts at their proficiency levels." Teacher guidance includes prompts for listening, speaking, reading, and writing at the beginner, intermediate, and advanced proficiency levels. The print files include handouts for the beginner, intermediate, and advanced proficiency levels. Materials include teacher guidance for differentiated activities for students who have not yet reached proficiency in grade-level content and skills. In grade 2 Represent Numbers to 1,200 scope, Explore 1: Count and Organize Collections within 1,000 the materials include tiered supports and strategies applied during the lesson for students at each proficiency level, which includes a Student Journal, Exit Ticket, and Math Chats in both English and Spanish.

- The materials include dedicated sections listing the English Language Proficiency Standards that are supported in each activity. Teachers use the scope's anchor charts, vocabulary cards (featuring the word and a visual), and the Language Support section (which provides sentence stems to aid in discussions) to strengthen understanding. The Word Wall cards and Picture Vocabulary slides found in every scope help the teacher build academic vocabulary as the unit progresses. In addition, the Language Support section found in each activity guides the teacher to help students build their academic vocabulary. For example, in grade 2, Represent Numbers to 1,200 scope, Explore 1: Count and Organize Collections within 1,000 the Language Support section provides the following guidance for teachers, "Allow time for students to explore the seeds and paper cups. Provide examples of the words ones, tens, hundreds, and groups to support students in participating in class discussions. Provide word walls and anchor charts depicting the words hundreds, tens, and ones. Students may use these to self-monitor as they are responding to questions or talking with their groups. Model responses for students to repeat. When asking about the number of seeds at each station, point to the groups of hundreds, tens, or ones. Prompt students to say, 'There are ___ hundreds, ___ tens, and ___ ones. This equals ___ seeds.'"

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

- The Implementation Guide in the Teacher Toolbox explains the inclusion of multilingual language supports found in the materials, "To promote equity in the classroom, STEMscopes Math has integrated research-based strategies and tools to support emergent bilingual learners at various proficiency levels with an additive approach rooted in what students can do." In the Implementation Guide, the materials explicitly refer to the English Language Proficiency Standards (ELPS) and strictly align with the ELPS. The Scope and Sequence for grade 2 lists the ELPS as included standards for each scope, and the Language Supports section provides ELPS supports.
- The materials explicitly reference the ELPS and "[provides] research-based strategies and tools to support linguistically diverse learners at various proficiency levels." For example, the Teacher Toolbox provides downloadable sheets containing Proficiency Levels by Domain (English only), Sentence Stems (English and Spanish), and Working on Words (English and Spanish) to establish and strengthen academic vocabulary connections. Materials include information related to the state-approved bilingual programs.

- The Teacher Toolbox provides a Linguistic Diversity document that guides teachers to support emergent bilingual students. The document explains the materials use "integrated research-based strategies and tools to support linguistically diverse learners at various proficiency levels. In the curriculum, we have created opportunities for linguistically diverse students to engage in authentic learning through multimodal communication." The Linguistic Diversity document provides links to resources teachers may use to support their emergent bilingual students in the classroom. The resources include a Proficiency Levels by Domain document to "provide an overview of how students are applying language across different domains, as well as methods and tools that can be applied to provide support," a Sentence Stems document for students to "practice engaging in purposeful discussion," and a Working on Words "open-ended activity [allowing] students to take agency and accountability for their growing vocabulary. This activity also encourages making relevant, personal connections to new terms in different ways, such as identifying cognates."

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

- The materials include the resource Working on Words, an "open-ended activity that allows students to take agency and accountability for their growing vocabulary. This activity also encourages making relevant, personal connections to new terms in different ways, such as identifying cognates." To further build vocabulary, the materials include picture vocabulary cards with each scope and sample anchor charts with guidance to build the anchor chart with the students. The Language Supports found in the Explore activities provide the teacher with guidance to ensure emergent bilingual students develop academic vocabulary, increase comprehension, and build background knowledge through oral and written discourse. For example, in the grade 2 Represent Numbers to 1,200 scope, Explore 2: Count Organized Collections within 1,000 the Language Support states, "Provide simple one-step directions for each part of the activity, such as the following: Look at the seed images. Group and count the seeds. Draw a model. Write how many hundreds, tens, and ones. Actively monitor group work to make sure all learners have opportunities to speak. If students need encouragement, ask probing questions such as the following: What are you counting by? Is there a quicker or more efficient way to count? Allow wait time. Do not rush students to produce oral or written explanations."
- The materials include sentence stems and frames, allowing students to practice with and participate in oral and written discourse. Students use the sentence stems and frames to explain, agree, disagree, ask for clarification, and add to discussions found in the Multilingual Learners section of the Teacher Toolbox. The materials include sentence stems that are specific to each Explore in each scope. Guidance for teachers includes, "During group work, actively monitor to make sure that all students are having a turn to talk about the coins. Provide some sentence structures as needed." For example, in the grade 2 Money scope, the language support in Explore 1 includes the sentence stems, "The value of this coin is ___. We skip counting the value of this coin by ___. The total value of the collection is ___."

- The materials include teacher guidance for Accessing Prior Knowledge, a Foundation Builder to fill in gaps and clear preconceptions, and a Hook that has a phenomenon to engage students and kick off the scope under the Engage tab. In each Explore tab, the materials include language support. For example, in the grade 2 money scope, Explore 1 Language Support states, "Call attention to the different endings for present-tense and regular past-tense verbs such as count and counted and group and grouped." Additionally, the materials provide opportunities for teachers to guide students in making cross-linguistic connections through both oral and written discourse by presenting the Language Connections materials and the picture vocabulary slides in both English and Spanish.

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 states, "STEMscopes math is a research- and standard-based, objective driven, data-driven, and rigorous curriculum that is well suited for a dual language immersion classroom."
- Within the Implementation Guide, the materials state, "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 trans-adapted Spanish materials that give Spanish-speaking students equal access to the content in our curriculum."
- The materials further state, "All of our student-facing materials are available in both English and Spanish versions. This allows educators in the DLI programs to provide opportunities for students to use their entire linguistic repertoire and plan for explicit language-bridging opportunities within the classroom. Between 30% and 40% of vocabulary words are cognates between English and Spanish. This percentage jumps to approximately 70% of academic vocabulary encountered in math and science due to the Latin origins of the Spanish language. 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 materials include practice opportunities over the course of a lesson and/or unit (including instructional assessments) that require students to demonstrate depth of understanding aligned to the TEKS. Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.

Evidence includes, but is not limited to:

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

- Practice opportunities in materials engage students in levels of rigor appropriate for the grade level as defined in the TEKS. For example, in the grade 2 Length scope materials for Explore 5 - Solve Problems Involving Length, students solve a scenario to help measure items for a birthday party using Task Cards to estimate the lengths of various birthday party items. The materials identify concepts and solve real-world, relevant tasks and problem-solving situations that align with the TEKS, including concrete representations. For example, in the grade 2 Area scope Explore 1: Cover Rectangles with Squares, students complete the building of rectangular shapes by selecting the measurement (in/cm) and then adding cubes to represent the distance. After building the figure, the student counts the number of rectangles to determine the area. Guiding questions for the teacher facilitates academic conversation in the Math Chat along with an aligned Exit Ticket.
- The materials identify concepts and solve relevant real-world tasks and problem-solving situations that align with the TEKS, including concrete representations. Each scope has Life Connections in the Elaborate tab. For example, in the grade 2 Add and Subtract Three-Digit Numbers scope, the materials include a lesson and guidance for students to make connections with a bank teller after watching a video clip at a bank. Students record and solve problems involving deposits and withdrawals. The Suggested Scope Calendar for grade 2 suggests teachers use Daily Numeracy at the beginning of each lesson so students may practice skills based on the grade level TEKS. For example, the Guess the Number Activity covers the TEKS 2.2D: Use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols (>, <, or =). In this activity, students ask yes-or-no questions as they try to guess the number in the range presented. Sentence stems include, "Is the number greater than, less than?"

- The resources contain a range of assessments that prompt students to showcase their comprehension at the level of understanding that aligns with the TEKS. For example, the grade 2 Decide and Defend assessments ask students to "reason mathematically and support their ideas with evidence using an open-ended assessment." In the grade 2 Add and Subtract Three-Digit Numbers scope, students decide which other student correctly solved the number of fiction and nonfiction books in the library and then defend or prove their answer using a different strategy. In the grade 2 scope Numbers on a Number Line, materials include an Observation Checklist for the teacher to record the student's learning progress in the daily activities. For example, the Observation Checklist Teacher Handout supports TEKS 2.2E: Locate the position of a given whole number on an open number line with checkpoints including "Physical modeling, Pictorial modeling, Problem-solving, Discussion, and Written explanation."

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

- The materials include scaffolding questions that connect concepts within and across lessons, modules, and units. For example, at each grade level, students engage in discourse around a provided question or prompt that uses routines to facilitate structured conversations. The materials for grade 2 Math Chats for each Explore list Webb's Depth of Knowledge (DOK) levels alongside guiding questions and exemplar student responses. As the DOK levels increase, the cognitive demand for students increases. For example, in the grade 2 Area scope, Explore 1 - Cover Rectangles with Squares presents DOK Level 2, 3, and 4 questions with suggested student answers that progressively increase in rigor and complexity.
- The materials provide student tasks that foster critical thinking, problem-solving, real-world application, and conceptual understanding. For example, the Problem-Based Tasks and Mathematical Modeling Tasks are collaborative elements that allow students to solve meaningful problems with real-world contexts. For example, the grade 2 Area scope, Explore 1: Cover Rectangles with Squares, includes building an area model. The Fluency Builder provides a matching game where students pair up the answer with the picture of a given area and a problem-based activity (real world) where students use and apply skills to map out the area of sections in a park. For example, in grade 2, Represent Numbers to 1,200 scope, Explore 1: Count and Organize Collections within 1,000 students have seeds and paper cups and count the seeds using the best way they think (grouping by 10s) before recording a pictorial model and the number of hundreds, tens, and ones for their numbers of seeds. Students then engage in a class discussion, sharing their strategies and what they learned.
- The materials provide a variety of assessments with questions and tasks that increase in rigor and complexity for students to show a depth of understanding aligned with the TEKS. For example, in grade 2 scopes, the materials include a Decide and Defend assessment found under the Evaluate tab. The teachers have a rubric to guide scoring. The rubric elements begin with understanding, then move to computation, ending with reasoning (starts at a lower level of knowledge and increases).

Depth and Coherence of Key Concepts

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

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

Evidence includes, but is not limited to:

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

- The materials include a scope and sequence that follows the natural progression of mathematics with embedded tools, representations, and scaffolds to build coherence across grade levels. Each scope builds on the last, "ensuring students develop a robust and interconnected understanding of mathematics from the start. The journey through the scopes of STEMscopes Math reflects a deliberate progression from foundational numeracy and geometric concepts to more complex mathematical thinking and real-world applications. Each scope is carefully crafted to build on previous knowledge, ensuring a seamless transition between concepts as well as fostering a deep, comprehensive understanding of mathematics."
- The materials include a vertical alignment chart of the 2019 Math TEKS for grade Kindergarten through grade 3 in the Teacher Toolbox and the Content Unwrapped tab for each scope. The Content Support has a section titled Coming Attractions, connecting learning in grade 2 to grade 4. For example, in the grade 2 Compare and Order Numbers scope, the Content Support 'Coming Attractions' section states "Fourth graders further extend their skills by comparing and ordering whole numbers to 1,000,000,000 and representing comparisons using the

symbols >, <, or =. They also compare and order decimals by using concrete and visual models to the hundredths." For example, the grade 2 Personal Financial Literacy scope, Content Support 'Coming Attractions' section states, "Students continue to build on this concept as they extend their understanding of personal financial literacy. In third grade, students will focus on the link between human capital and labor and income."

- The materials include a Vertical Alignment for each scope in the Content Support. For example, in the grade 2 scope for Compare and Order Numbers, the Content Support Background Knowledge explains in kindergarten, "students also compare sets up to 20 by using comparative language as well as using comparative language to describe two written numbers up to 20. In first-grade, students generate numbers that are greater than or less than a given number up to 120. They use place value and models such as number lines to compare whole numbers up to 120 using comparative language such as greater than, less than, and equal to. In addition to using comparative language, students learn to use the comparative symbols >, <, and = to compare two numbers up to 100." For each grade (grades Kindergarten-grade 5), the materials include a logically sequenced scope and sequence, with topics introduced in a logical order. For example, the grade 2 Course Rationale in the Teacher Toolbox explains, "Grade 2 begins with the Represent Numbers to 1,200 scope, which significantly extends the numerical horizon for students and challenges them to compose and decompose numbers in various ways. This scope is pivotal, as it lays the groundwork for understanding place value and the base-ten system that is essential for developing flexible, accurate, and efficient strategies for addition and subtraction. In the Numbers on a Number Line scope, students apply their understanding of place value. This scope introduces students to the spatial representation of numbers and enhances their ability to visualize numerical relationships and the relative magnitude of numbers."

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

- The materials include a Course Rationale in the Teacher Toolbox that states, "Each scope in Grade 2 STEMscopes Math is carefully crafted to build on previous knowledge, ensuring a seamless transition between concepts as well as fostering a deep, comprehensive understanding of mathematics." Also included is a table listing the TEKS and connecting standards for each grade level. The table "supports the progression within and across the major mathematical topics in this grade level and emphasizes the connections among the major mathematical topics throughout the instructional year." The grade 2 Course Rationale provides a structured table showing the progression of mathematical concepts and a scope and sequence that follows a logical flow of development, with each unit building on the previous unit. The table shows Numbers on a Number Line covers the mathematical concepts of Place Value and Properties of Operations, Addition and Subtraction, and Mathematical Relationships. These two concepts build throughout grade 2 and into future grade levels.
- In grade 2, instructional time focuses on four areas, "(1) understanding and applying place value concepts and properties of operations; (2) developing strategies to add and subtract whole numbers; (3) building a foundation for multiplication and division; and (4) analyzing relationships in numbers, fractions, geometry, and measurement." A table includes the four

big ideas and their connectedness throughout the course. According to the table, the grade 2 Data Analysis scope connects all four big ideas.

- The materials provide a structured progression and a scope and sequence of mathematical concepts that follow a logical flow of development with each unit building on the previous unit with an overview that explains the big ideas, tools, and representations used throughout the unit. The Content Support explicitly connects to previous units or grade levels, where students have learned prior knowledge needed for the upcoming unit. The grade 2 Course Rationale provides guidance for how the mathematical concepts connect across the units through patterns, big ideas, and relationships. The rationale explains, "The areas of focus highlighted in the table: Support the progression within and across the major mathematical topics in this grade level and emphasize the connections among the major mathematical topics throughout the instructional year." For example, in grade 2 Represent Numbers to 1,200 scope, the rationale explains, "This scope is pivotal as it lays the groundwork for understanding place value and the base-ten system that is essential for developing flexible, accurate, and efficient strategies for addition and subtraction."

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 under the Home tab includes Implications for Instruction that describe prior learning experiences with the content and provides suggestions to connect and solidify new learning in the scope. For example, the Implications for Instruction in the Content Unwrapped for the grade 2 Data Analysis scope states, "Multiple opportunities with converting pictographs into bar graphs can help students understand that the same data can be represented in different ways." For example, in the 2 Compare and Order Numbers scope, the Content Support explains the coherence across grade levels as "in kindergarten, students create concrete and pictorial sets of one more or one less or an equal amount of a given set... [in] first grade, students generate numbers that are greater than or less than a given whole number up to 120. They use place value and models such as number lines to compare whole numbers up to 120 using comparative language such as greater than, less than, and equal to."
- The materials connect grade-level content with language both previously learned and to be learned in future grade levels. For example, in grade 2, students learn to use academic language that includes generate, greater than, more than, less than, equal to, place value, compare, model, symbol, etc. In future second-grade scopes and future grade levels, students use these terms to explain, describe, and compare numbers. The Content Unwrapped and Visual Glossary includes concrete words on Picture Vocabulary cards (digital and print form) in the Explain tab for each scope, definitions and visuals adjust slightly for grade-level appropriateness. The words students learn in the grade Kindergarten Money scope include coin, penny, nickel, dime, and quarter. The Visual Glossary for the grade Kindergarten vocabulary word dime includes front and back images of the coin with the word dime on it. In grade 1 and grade 2, the Visual Glossary adds the definition, "A coin that has a value of 10 cents" to the image of the front and back of the dime.

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.

- At the lesson level, materials include pictorial representations and conceptual illustrations, including graphic organizers, which review prior knowledge to introduce new information within a concept. For example, in grade 2, students model, create, and describe contextual multiplication and division situations. Students begin with modeling and describing contextual scenarios by using manipulatives, drawing pictures, or acting out a scenario. As students gain confidence in modeling and describing contextual situations, they have opportunities to create their own multiplication and division scenarios for others to solve. Accessing Prior Knowledge in each scope provides an opportunity for students to activate their prior knowledge and concepts from previous and current grade levels to new concepts and procedures. For example, in the grade 2 Compare and Order Numbers scope under the Engage tab, the Accessing Prior Knowledge activity has students compare two numbers using a comparative mat and comparative language.
- Materials review prior knowledge with pictorial representations and conceptual illustrations, including graphic organizers to introduce new information within a concept. For example, in the grade 2 Money scope, Anchor Chart under the Explain tab Explore 1 uses the procedure of building an anchor chart with the class to remind students of the name and value of coins and how to determine the value of a collection of coins. The materials provide an example anchor chart and teacher directions for creating the anchor chart. The materials include using an Interactive Student Journal as part of the lesson procedure and provide space for students to identify coins and their value and count a collection of coins. The Foundation Builder activity in every scope provides opportunities for students struggling to scaffold previous learning to new concepts and procedures, such as games. For example, in the grade 2 Compare and Order scope, Foundation Builder, under the Engage tab, students read and compare two numbers up to 100 using symbols and comparative language.

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 materials provide spaced retrieval opportunities embedded within the lesson. For example, in the Elaborate section of the lesson, the materials include a spiraled review of previous and current grade-level content based on the "critical areas of focus set for each grade," with the spiral review questions embedded in the lesson. For example, the grade 2 Area scope provides a Spiraled Review - Basketball to use as a warm-up or homework. Students add, compare measurements, represent the number 43 in standard, word, and expanded form, and partition pizza, which are taught in prior scopes. Accessing Prior Knowledge at the beginning of each scope in the Engage Tab provides opportunities for students to retrieve previous skills and concepts before beginning a new scope. For example, in the grade 2 Numbers on a Number Line scope, Accessing Prior Knowledge, students engage in an activity where they place numbers in order on an open number line and compare their numbers to other students' numbers. The materials provide modeling examples, tasks, and discussion prompts that activate students' prior knowledge of preceding concepts as an access point for building new mathematical understanding. For example, in the Accessing Prior Knowledge for the grade 2 Add and Subtract Two-Digit Numbers scope, students discuss addition and subtraction strategies that they know before starting the new unit on addition and subtraction.
- Daily Numeracy provides opportunities for frequent and short retrieval practice with a Math Talk, where students "build their thinking and reasoning around relationships and connections." With nine research-based activities available, Daily Numeracy provides opportunities to engage students in practicing previously learned skills and concepts from earlier scopes and grade levels. The materials include an activity list for Daily Numeracy with spiraled standards and an example of a weekly plan. Used across units (scopes), the suggested Daily Numeracy routine helps develop students' thinking skills and reasoning in math. The materials state, "The activity does not have to relate to the skill or content that students are currently working on in class." The materials include a spiraled review in each

scope. For example, in the grade 2 Money scope, the spiraled review asks students to use mental math or algorithms to solve a problem, divide a dog biscuit into equal parts, recall basic facts, and record a number in standard, word, and expanded form, all of which were skills taught in previous scopes.

- The Spiraled Review found in the Elaborate tab for each scope provides opportunities for students to practice previously learned skills and concepts across lessons and scopes. For example, in the grade 2 Compare and Order Numbers scope, the Spiraled Review - Family Game Night includes four questions - two from the previous scopes Represent Numbers to 1,200 to support TEKS 2.2AB and two from Numbers on a Number Line to support TEKS 2.2EF.

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

- The materials include interleaving across lessons for previously learned concepts. For example, in the grade 2 Compare and Order Numbers scope, students apply previously learned skills and concepts learned in Representing Numbers to 1,200 to identify the value of the digits and then compare the value of the numbers. The materials include opportunities to revisit concepts in different contexts throughout the lesson. For example, in the grade 2 Add and Subtract Three-Digit Numbers scope, the Content Support in the Home tab states, "All of the following strategies help students to determine sums and differences without the use of manipulatives." The strategies listed for addition and subtraction with definitions and examples are place value, number line, and compensations. Teacher materials support interleaved practice opportunities across the lesson in the Teacher Toolbox in the Process Standards tab. For example, Process Standards - Create and Use Representations states, "Students connect mathematical ideas and concepts through the representations they create. These representations come in a variety of forms, such as pictures, drawings, concrete objects, graphs, tables, charts, acting out, virtual manipulatives, and symbols. Questions are asked, thoughts are challenged, and mathematical relationships, connections, and ideas are to be made using this process standard."
- The materials include a scope and sequence with related ideas taught in proximity to practice opportunities of previously learned skills and concepts across units. For example, in the grade 2 Data Analysis scope, students must use their previously learned skills from the Addition and Subtraction scope to write and solve addition and subtraction problems using pictographs and bar graphs in Explore 4. The practice continues across lessons and units when using the Process Standards tab in the Teacher Toolbox. Teachers access the Process Standards tab to facilitate instruction of the seven mathematical process standards across all units. For example, Process Standards - Analyze Relationships to Communicate Ideas ((A) Apply mathematics to problems arising in everyday life, society, and the workplace and (F) Analyze mathematical relationships to connect and communicate mathematical ideas) states, "Analysis of mathematical relationships to connect and communicate ideas must be developed through consistent use in many contexts" so teachers "Connect new learning with prior knowledge. Provide challenging, meaningful tasks that provide multiple entry points. Provide games to reinforce the underlying concept and strengthen students' ability to make

connections... [and] helping them organize their thoughts as they analyze as well as begin to make connections and communicate their ideas."

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

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

- The materials provide questions and tasks requiring students to interpret a variety of models and representations for mathematical concepts and situations. For example, in the grade 2 Add and Subtract Three-Digit Numbers scope, Explore 3 asks students to solve three-digit addition and subtraction problems by helping with the family budget. Procedure and Facilitation point number four states, "Instruct students to work with their partners to read and solve each Task Card using different addition or subtraction strategies. They will write a number sentence and show their strategies in the Student Journal."
- The teacher guide provides questions and tasks that prompt students to engage with various models and representations to analyze concepts. For example, in grade 2 Represent Numbers to 1,200 scope, the teacher materials suggest teachers use a variety of models and representations that include a variety of concrete objects such as base ten blocks, seeds, cups, and bags, pictorial models such as place value charts and base ten pictures, and representations such as standard form, word form, and expanded form. In the grade 2 Compare and Order Numbers scope, the Explore 2 activity presents students with the scenario of their school's spelling bee scores. Students interpret the scorecards given to them. Students then build the numbers using base ten blocks and compare the numbers using the correct symbol (<, >, =). Lastly, students evaluate their answers and explain how they determined who won the spelling bee.
- The materials provide questions and tasks requiring students to evaluate a variety of models and representations for mathematical concepts and situations. For example, in the grade 2 Fractions scope, students have multiple opportunities to model fractional parts, such as

partitioning by folding or cutting actual concrete objects before students draw lines to partition shapes on paper. Connecting the partitioning of objects to real-world experiences helps students understand the concept of fractions. Students then solidify the concept by sharing their partitioned shape with other students to understand the various ways to divide shapes.

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

- The questions and tasks in the materials prompt students to create a variety of models to represent their understanding of concepts. For example, in the grade 2 Compare and Order Numbers scope, students answer questions and complete tasks to compare and order whole numbers up to 1,200 using base ten blocks, place value charts, number lines, comparative language, numbers, and the symbols <, >, and =, then draw and write the representation in their journal sheet. Some questions include, "Which students spelled more than 600 words correctly? How does this help you order the scores from greatest to least? Which students spelled between 500 and 600 words correctly? How does this help you order the score from greatest to least? How do you know when to use the < symbol? How do you know when to use the = symbol? > symbol?"
- In grade 2 Represent Numbers to 1,200 scope, students use manipulatives and models to compose and decompose numbers up to 1,200 across multiple Explore activities by first using base ten blocks, seeds, and jelly beans with the place value chart, next drawing the models in their journal sheets, then writing the symbols (numbers) to represent the three different forms (standard form, word form, and expanded form). Some questions include, "What information do we know? What information do we need to find out? What strategies did you use to build the numbers? What do you do if there is a zero in the number? What is another way to build the number 318? How do you say the number 507? How do you write a number in expanded form?"
- In the grade 2 Add and Subtract Three-Digit Numbers scope, the Explore 3 activity has students solve three-digit addition and subtraction using various addition and subtraction strategies such as place value, number line, and compensation. Students share their strategies, have time to ask questions, and notice similarities and differences in the processes they used before answering the questions during the Math Chat, such as "What do you notice about the strategies we used to solve each problem? When you are solving a problem, what strategy seems to help you?"

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

- The materials include questions that prompt students to apply conceptual understanding to new situations and contexts. For example, in the grade 2 Compare and Order Numbers scope, the Math Chat in Explore 2 asks, "How did plotting the numbers on the number line help you compare the numbers?" and "When would you need to compare or order numbers outside of

school?" The Problem-Based Task Zoo Food Facts in the grade 2 scope Compare and Order Numbers has students apply their understanding to an open-ended, real-world problem. Students must help the zookeeper determine how much food they need to buy for the animals when prompted with clues such as "Lions eat more than 500 pounds a week. What three numbers could it possibly be?"

- The materials include tasks that prompt students to apply conceptual understanding to new situations and contexts. For example, in grade 1, Add and Subtract within 20 scope, students use the Fluency Builder to apply what they have learned while playing a game where they must solve addition and subtraction problems involving a variety of representations, models, and contexts.
- The Daily Numeracy for grade 2 in the Scopes tab includes guidance for facilitating conversations with questions that help students build beyond procedures and solidify their understanding of mathematical concepts. In these student-led conversations, teachers "help students articulate their thinking by asking clarifying questions that prompt students to find the meaning in their strategy [and challenge] students to make conceptual connections rather than procedural explanations. [The students will] defend their thinking [with encouragement] to seek different ways to prove their answers."

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

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

- The materials include daily exercises that target specific skills or concepts that build automaticity and align fluency activities with grade-level content. For example, the grade 2 materials present Daily Numeracy as a quick routine "to empower students to reason with numbers in an accurate, efficient, and flexible way." Daily Numeracy activities in grade 2 provide opportunities for students to develop fluency with mathematical thinking and reasoning that incorporates the grade-level TEKS.
- The materials include Fact Fluency for students to build a solid understanding of the concepts of addition and subtraction and the thinking strategies necessary for solving such problems, as opposed to their fingers or skip-counting methods. STEMscopes Mathematics uses a four-part process to ensure students get the most out of their time with Fact Fluency. The Fact Fluency: Addition and Subtraction in grade Kindergarten through grade 2 provides tasks to build the automaticity and fluency needed to complete grade-level concepts. For example, grade Kindergarten, grade 1, and grade 2 Fact Fluency: Addition and Subtraction follows the progression: Sums within 5; Related Facts within 10; Plus 0, 1, 2; Minus 0, 1, 2; Doubles; Making Ten; Plus/Minus Ten; Using Ten; Using Doubles; Sums within 20; Differences within 20; and Related Facts within 20.

- The materials include gamified learning experiences that build students' math fluency. For example, in the grade 2 Money scope, students determine and represent the value of coins using symbols in an interactive game that provides immediate student feedback.

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 opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures within the lesson. The Fluency Builder activities within Elaborate provide opportunities for students to practice the skills in each scope, allowing them to become efficient, flexible, and accurate with their mathematical procedures. For example, in grade 2, Represent Numbers to 1,200 scope, the Fluency Builder - Represent Numbers to 1000 in Different Ways, the students play a game with a partner where students have to find matches of a number (standard form and base ten models). After the students have finished the game, the materials suggest, "Explain why the two cards are a match." This game allows students to apply the most efficient strategy while being flexible and accurate mathematically.
- The materials include opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures throughout a unit. The materials include activities that require manipulatives for hands-on exploration of mathematical concepts to develop procedural skills and fluency through practical application. The grade 2 materials include a Game Board and Fact Fluency stations/activities where students work with a partner to build addition and subtraction fluency. For example, in the grade 2 Fact Fluency Addition and Subtraction, Sums to 5- Station 1, students use colored counters with a partner to solve scenarios with sums to 5. Students choose different strategies to solve while promoting conceptual understanding and practicing and refining procedural skills for fluency.
- The materials include 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 a "research-based Daily Numeracy program ... to empower students to reason with numbers in an accurate, efficient, and flexible way." The grade 2 Daily Numeracy activities reinforce and apply previously learned procedures. They include tasks that offer multiple entry points. Students choose different strategies to solve while promoting conceptual understanding and practicing and refining procedural skills for fluency.

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

- The materials provide strategic questions teachers use during instruction. The questions prompt students to think critically about the most efficient approach, find an alternate solution, and/or apply a procedure to all situations. For example, the grade 2 Daily Numeracy activities prompt students to solve problems using multiple appropriate strategies. The grade 2 Daily Numeracy states, "As students devise strategies to solve the problem, they discreetly signal to the teacher... During this time, students continue looking for different strategies.

Once every student has at least one strategy to share, the teacher has the option to invite students to share with partners first, or to ask students to volunteer to share their strategies out loud."

- The materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the unit. For example, the grade 2 Area scope, Problem-Based Task under Elaborate - Park Planner, suggests that "students work collaboratively to apply the knowledge and skills they have learned to an open-ended, real-world challenge." Students access their student journals from the Explore activities if they need to review skills they have learned. If students struggle with the task, the teacher provides guiding questions to help students think critically about the next step. If time permits, the teacher allows each group to share their solution with the class and discuss how different groups completed the challenge differently.
- The materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the unit. The materials include activities that allow students to analyze procedures and solutions for completed problems. In the Decide and Defend under Evaluate, students analyze a completed problem to determine if the solution is correct or incorrect. If there are errors in the procedure, the students identify where the error occurred in the worked-out problem. Students then work to find another method to solve the problem. The Decide and Defend in the grade 2 Data Analysis scope asks students to decide if Juan created a pictograph correctly representing the coins in his coin jar and defend their reasoning. This task allows students to share the different strategies they learned throughout the unit and evaluate to find the most efficient and flexible strategy use that was also accurate.

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

- The materials contain embedded supports for teachers to guide students toward increasingly efficient approaches. For example, the Teacher Guide in the Home section under Scope Overview embeds teacher support to help guide students toward developing efficiency. The guide refers teachers to the Daily Numeracy sessions to provide extra practice for students to become more efficient and fluent with the strategies learned. The Content Support in the Home section guides teachers in understanding strategies developed within the materials and the trajectory of learning from less efficient to more efficient strategies. It explains why a certain tool is appropriate and efficient for solving a task.
- The materials include Skill Basics in Explore, which has Procedure and Facilitation points for explicit modeling of efficient strategies. For example, in the grade 2 Add and Subtract Three-Digit Numbers scope, the Skill Basics - Addition and Subtraction Strategies states, "Hang a piece of chart paper with a marker at the front of the classroom to model strategies or dictate the strategies students use to solve the problems."
- The materials include support for teachers in understanding strategies developed within the materials. In the grade 2 Area scope, the Explore 1- Cover Rectangles with Squares activity provides Instructional Support to guide teachers in supporting students who struggle to try

optional strategies. Embedded content supports include Background Knowledge, Misconceptions and Obstacles, Terms to Know, and Applying Mathematical Process Standards to inform the teacher how and what is being taught in the Scope. Detailed information and examples provided in the Coming Attractions section assist teachers with vertical alignment.

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 materials include Student Expectations, Key Concepts, and Fundamental Questions in the home tab of each scope. Content Unwrapped and Content Support in the Home tab aid teachers in lesson planning with a clear understanding of the specific goals and priorities of the scope as outlined in the TEKS. These resources help teachers align instructional strategies with the required conceptual emphasis, ensuring appropriate coverage of the essential concepts and skills. For example, in the grade 2 Compare and Order Numbers scope, the materials state, "[students] demonstrate their understanding of place value and their ability to compare and order numbers up to 1,200 by using comparative language, numbers, [and symbols]" when given a whole number from 1 to 1,200. Students "generate a number less than or greater than the given number... [and] find numbers that are 10 or 100 more or less than a given number up to 1,200."
- The lessons in the materials intentionally target the emphasis of the standards being addressed: conceptual understanding, procedural fluency, or problem-solving skills, and the modules, lessons, and units include explicit learning objectives highlighting supporting coverage for the grade level TEKS. The materials clearly explain mathematical concepts as the "why" behind mathematical procedures. For example, the grade 2 Personal Financial Literacy scope introduces financial literacy through saving, spending, borrowing, and lending. Students apply addition and subtraction skills to a real-world context as they calculate changes in an account balance because of spending and saving decisions and explore money management, setting a foundation for responsible financial behavior.

- The grade 2 Content Support in the Home section provides the TEKS used in the scope and lists how the students build conceptual and procedural understanding and master the standards. For example, in the Area scope, the Content Support under Applying Mathematical Process Standards states, "Students determine the area of rectangles in everyday life, society, and workplace situations, such as becoming the designer for a landscaping company." This real-world example satisfies TEKS 2.1A: Apply mathematics to problems arising in everyday life, society, and the workplace.

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

- Questions and tasks include the use of concrete models. The scopes in the materials include hands-on activities with models or manipulatives that represent mathematical concepts. For example, in the grade 2 Three-Dimensional Solids scope, in Explore 5 - Compose 3-D Solids, students use mini marshmallows, dough, toothpicks, coffee stirrers, chenille stems, and tape to build three-dimensional shapes in the lesson. The modules, lessons, or units include hands-on activities with models or manipulatives that represent mathematical concepts. For example, in the grade 2 Area scope, students use concrete models to find the area of rectangles in the Explore 1 - Cover Rectangles with Squares activity.
- Questions and tasks include the use of pictorial representation (figures/drawings). The lesson materials incorporate detailed drawings and visual representations, symbolic notations, numeric expressions, and algorithms to illustrate concepts. For example, in the grade 2 Addition and Subtraction Problem-Solving scope, students represent and solve one-step word problems pictorially (number line or diagram) and write the number sentence that represents each answer.
- Questions and tasks include the use of abstract representations. The questions and tasks in the materials follow a pathway that clearly outlines how the conceptual understanding of key concepts relates to the procedural to create a thorough line of mastery to abstract representation. The lesson materials incorporate detailed drawings and visual representations, symbolic notations, numeric expressions, and algorithms to illustrate concepts. The materials provided engage students with multiple representations and anchor points for the teacher to reference when addressing student misconceptions.

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

- The materials include opportunities for students to articulate their emerging understanding of mathematical concepts and procedures through modeling, discussion, and practice. For example, the materials for grade 2 begin with representing numbers up to 1,200, which "significantly extends the numerical horizon for students and challenges them to compose and decompose numbers in various ways... it lays the groundwork for understanding place value and the base-ten system that is essential for developing flexible, accurate, and efficient strategies for addition and subtraction."

- The lesson materials provide students with multiple practice opportunities for standards-aligned tasks to work toward mastery of grade-level content. The materials include interactive software where students manipulate virtual manipulatives and connect them to abstract processes. For example, in the grade 2 Add and Subtract Three-Digit Numbers scope, students use virtual manipulatives, base ten blocks, and number lines to explore and present their solutions to adding and subtracting three-digit numbers.
- The materials include opportunities for students to build automaticity with fluency skills necessary to complete grade-level tasks. To build automaticity with fluency, STEMscopes Mathematics uses a four-part approach that includes "[introducing] the strategy with discussion and hands-on manipulation, [reinforcing] the strategy with discussion and visual models, [practicing] the strategy with discussion, [then applying] the strategy with discussion, games, and everyday applications." The materials include scaffolded tasks that guide students in creating their models. For example, in the grade 2 Area scope, the activity titled Life Connections: Make Over My Bathroom provides students the autonomy to create and plan a new bathroom floor plan. The materials include opportunities for students to explain their emerging understanding of mathematical concepts and procedures through modeling, discussion, and practice.

Balance of Conceptual and Procedural Understanding

5.4	Development of Academic Mathematical Language	14/14
5.4a	Materials provide opportunities for students to develop their academic mathematical language using visuals, manipulatives, and other language development strategies.	**3/3**
5.4b	Materials include embedded guidance for the teacher addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context.	**2/2**
5.4c	Materials include embedded guidance for the teacher to support the application of appropriate mathematical language to include vocabulary, syntax, and discourse to include guidance to support mathematical conversations that provide opportunities for students to hear, refine, and use math language with peers and develop their math language toolkit over time as well as guide teachers to support student responses using exemplar responses to questions and tasks.	**9/9**

The materials provide opportunities for students to develop their academic mathematical language using visuals, manipulatives, and other language development strategies. Materials include embedded guidance for the teacher addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context. Materials include embedded guidance for the teacher to support the application of appropriate mathematical language to include vocabulary, syntax, and discourse to include guidance to support mathematical conversations that provide opportunities for students to hear, refine, and use math language with peers and develop their math language toolkit over time as well as guide teachers to support student responses using exemplar responses to questions and tasks.

Evidence includes, but is not limited to:

Materials provide opportunities for students to develop their academic mathematical language using visuals, manipulatives, and other language development strategies.

- The materials provide opportunities for students to develop their academic mathematical language using visuals. For example, after students complete Explore 1 in the grade 2 Personal Financial Literacy scope, the teacher's directions state, "Call on a student to define saving and another to define spending. Invite the student to come up to write the definition in their own words. Discuss the following [questions] and allow students to come up and add their responses to the chart."
- The materials provide opportunities for students to develop their academic mathematical language using manipulatives that provide opportunities for students to read and listen to unfamiliar words in context and then apply those words in their speaking and writing. For example, in the grade 2 Personal Financial Literacy scope, the Hook lesson begins with the teacher showing the students the phenomena of a little girl with money in her hands and explaining the real-world scenario to the class. Students imagine they have $250 and decide if they will save or spend the money. As students are working, the teacher discusses the following questions and students use new mathematical vocabulary to respond: "DOK-1 What

is spending?... DOK-2 What are some examples of spending money?... DOK-3 What is a benefit of spending money?... DOK-3 What is a drawback of spending money right away?... DOK-2 What did you decide to do with your birthday money? Why?"

- The materials describe the development of mathematical vocabulary by first creating a need for the language through carefully designed tasks, visuals (anchor charts), and Vocabulary Cards (manipulatives). Students read and listen to new words in context and then apply those words in their speaking and writing using provided sentence stems. For example, in the grade 2 Length scope in Explore 3 - Distance on a Number Line, the Preparation section states, "[for] students who need more support in recalling information, see our Assorted Number Lines and 1–120 Number Chart Supplemental Aids elements in the Intervention section." The Language Supports in the same activity and scope gives further guidance to teachers and states, "Project the Math Chat questions. Pair students and have them take turns interviewing each other. Challenge students to respond using the math vocabulary words used during the Explore, such as distance, number line, and so on."

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

- The materials include scaffolds teachers use for students as they develop and use academic vocabulary. For example, in the Explain section of the grade 2 Launch scope, the materials provide the following engaging games to practice vocabulary and make connections among important words and concepts: Bingo, Fish Race, Heads Down, Words Up, Pop!, Roll-a-Word, and Splat!, Sticky Situation, Trashketball, Vocabulary Dominoes, and What Am I? The materials guide the teacher with support for scaffolding language. For example, in the grade 2 Compare and Order Numbers scope, the Content Support in the Home section lists potential areas of need in the Misconceptions and Obstacles section. The materials state, "Students may see equal as an action, such as add or subtract. The equal sign is a relationship that means ‘is the same as’ or ‘is the same value as.’ Students may need concrete and pictorial models to support their thinking and understanding of greater than, less than, and equal to."
- The materials direct teachers to have students complete their interactive journals, a place to take notes, express ideas, and process information and vocabulary after each Explore in every scope, because they "can be used as a student reference during independent work." For example, after Explore 3 - Job Skills in the grade 2 Personal Financial Literacy scope, the Language supports include the use of the Student Journal to draw and label a picture of someone completing a job with an emphasis on the mathematical message. The materials state, "Use visuals to support understanding of jobs. Provide images of each job and the skills or tools that are required to do the job successfully. Encourage students to explain their thinking to a partner and then share their partner's idea with the class. They can ask their partner for support as needed. [Using] sentence stems may also be helpful."
- Math Chats and DOK-level questions provide opportunities for students to develop academic vocabulary using manipulatives or visuals, allowing students to share strategies and make connections as they process learned standards. Teacher and student made Anchor Charts under Explain, which contain vocabulary, drawings, and definitions for student and teacher reference, and support students' listening, reading, speaking, and writing with the new

academic vocabulary. In the grade 2 Language Connections under Explain, students apply their linguistic and cultural background knowledge to make connections with new skills, vocabulary, and concepts that align with their proficiency levels (Beginner, Intermediate, Advanced).

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

- The materials provide a set of discussion questions used to facilitate discourse without limiting student responses, guiding students to apply mathematical vocabulary and develop mathematical language. For example, the materials include Daily Numeracy, where the teacher's primary role is to facilitate and encourage open dialogue. For example, the materials include Daily Numeracy, where the teacher's primary role is to facilitate and encourage open dialogue while reinforcing "precise mathematical language [and introducing] new mathematical terms for strategies that the students devise." As a facilitator of the Daily Numeracy activities, the teacher "[helps] students articulate their thinking by asking clarifying questions that prompt students to find the meaning in their strategy [and challenges] students to make conceptual connections rather than procedural explanations." Such discussions encourage students to apply mathematical vocabulary to justify their solutions for reasonableness and to find a variety of ways to prove their answers or responses.
- The materials include embedded teacher guidance on preparing for and facilitating strong student discourse grounded in quality tasks and concepts that use appropriate academic vocabulary. For example, in the Teacher Toolbox, the materials include the Communicate Math - Discourse tab with expectations for creating mathematical discourse. Expectations for grades Kindergarten through grade 2 in pairs, small groups, or in a whole group setting include: "Allow students to use tools or models necessary to help with their explanations. Provide sentence stems to help scaffold language. Include a variety of approaches to convey knowledge, strategies, justifications, and conclusions. Allow adequate wait time after asking a question or hearing a response...Include accurate academic math vocabulary."
- The materials include Math Chats, a forum for students to discuss collaboratively the concepts taught in the Explore lesson. This rich discussion helps students develop their number sense, mathematical vocabulary, and math thinking skills. A Math Chat is at the end of each Explore lesson online and is available in printable form. The Math Chat lists questions of various DOK levels for the teacher, along with exemplar student responses. For example, in the grade 2 Compare and Order Numbers scope, the Explore 2 - Compare and Order Numbers Math Chat states, "DOK-2 Which students spelled more than 600 words correctly? How does this help you order the scores from greatest to least? [student response] Gia, Shreya, Rodney, Imari, Ellyn, and Camille. All of these scores will be greater than the scores of students that spelled less than 600... DOK-4 When would you need to compare or order numbers outside of school? [student response] When I play basketball with my friend, we have to compare our

scores to see who won. When my mom makes our schedule for the day, we have to put the times in order."

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

Process standards are integrated appropriately into the materials.

- The materials appropriately integrate the process standards in all parts of the materials, including the lessons, student practice, and assessments. For example, in the grade 2 Data Analysis scope, the Exit Ticket for Explore 4 - Write and Solve Problems Using Pictographs and Bar Graphs, students have to "(B) Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution, and (F) Analyze mathematical relationships to connect and communicate mathematical ideas" after sorting objects, creating a real-object graph, and drawing conclusions about data.
- In the grade 1 Fractions scope, the materials integrate content and the process standards for lessons. For example, Explore 1 - Partition Objects lists Mathematical Process Standards (A) Apply mathematics to problems arising in everyday life, society, and the workplace, (C) Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems, and (E) Create and use representations to organize, record, and communicate mathematical ideas. The lesson begins with a scenario using Mathematical Process Standard (A) as students determine how to imagine colored construction paper as quilt squares to build a blanket. Students then use Mathematical Process Standard (C) as students use pencils and colored construction paper to partition shapes. Students then use the Mathematical Process Standard (E) to create a quilt from paper with their peers and record their findings in their Student Journals.

- In the grade 2 Add and Subtract Two-Digit Numbers scope, Explore 2 - Addition Using Number Lines integrates the process standards for each lesson in the Instructional Supports and the Language Supports. For example, Instructional Support 1 states, "Consider setting up a human-size number line along the floor of the classroom. Have students walk, hop, or jump to various locations," which incorporates Mathematical Process Standard (E). One Language Support states, "After explaining the scenario to the class, ensure they understand what they just heard. Discuss what a real estate agent's job is and what a showing is. Clarify the difference between weekday and weekend. Ask students to turn to their partner and paraphrase a real estate agent's job," which incorporates Mathematical Process Standard (A).

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

- The materials include a description of how the process standards are incorporated into the course. In the Teacher Toolbox, the materials group the Mathematical Process Standards by skill and offer guidance for incorporation into the course. For example, in Analyze Relationships to Communicate Ideas (A and F), grade 2 students make connections "between individual units and the base ten blocks. Students have been using individual units to compose a ten. By connecting this prior knowledge, students will be able to use base ten blocks as a representation of numbers up to 1,200" in the Represent Numbers to 1,200 scope. In Display, Explain, and Justify Mathematical Ideas (A and G), grade 2 students, "[strip] diagrams and number lines are used to represent and solve word problems. Students explain how they solved each word problem orally and in written form but justify their answer using the pictorial model," in the Addition and Subtraction Problem-Solving scope.
- The materials describe how process standards connect in the course. The Implementation Guide in the Teacher Toolbox under Essentials and Curriculum Design states, "The mathematical process standards are woven throughout our curriculum with the goal of building foundational skills that create effective thinkers in math. These standards are the bridge between knowing the content and knowing how and when to use it."
- In the Process Standards tab of the Teacher Toolbox, the materials list the Process Standards in their entirety, including a section titled Understanding the Standard, which defines the standard and its necessity for students, lists suggestions and motivations in the section titled What Teachers Should Do, and explains the Mathematical Process Standards as they relate to each unit in the section titled What Teachers Should Do.

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

- Each scope describes how process standards are incorporated with content throughout each unit. For example, "[students] work collaboratively to apply the knowledge and skills they have learned to an open-ended, real-world challenge" in the grade 2 Add and Subtract Three-Digit Numbers scope, Problem-Based Task under Elaborate - Shopping Spree.

- Each scope describes how process standards connect throughout each unit. For example, the grade 2 Personal Financial Literacy scope, Content Support in the Home section states, "2.1B Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution: Students use sorts, cards, menus, drawings, and a variety of materials to plan, test, and determine their solutions. They justify and evaluate the reasonableness of the solutions by discussing the math chat questions."
- The grade 2 Scope and Sequence in the Teacher Toolbox under Essentials and Curriculum Design includes the Mathematical Process Standards for each Explore within each Scope/Unit. The grade 2 Content Support in the Home section provides each Mathematical Process Standard along with a description of its use in the course: "2.1A Apply mathematics to problems arising in everyday life, society and the workplace: Students determine the area of rectangles in everyday life, society, and workplace situations, such as becoming the designer for a landscaping company."

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

- The materials include an overview of the process standards incorporated in each Explore (lesson) in the grade 2 Scope and Sequence in the Teacher Toolbox under Essentials and Curriculum Design. For example, the TEKS covered in Explore 1 of the Data Analysis Scope is 2.10A. Explain that the length of a bar in a bar graph or the number of pictures in a pictograph represents the number of data points for a given category, and the Math Process Standards incorporated are 2.1ABE.
- The materials include strategic questions for teachers to use during instruction. For example, in grade 2 Explore 2 - Organize Data Using Bar Graphs in the Data Analysis scope, the materials include the following teacher guidance and questions, "Does data in the bar graph change when represented horizontally or vertically?... Which of your categories has the most votes?... If you asked the same question in another class, do you think you would get the same results?" This Math Chat incorporates Mathematical Process Standards B, F, and G, which are listed at the top of the lesson.
- The materials appropriately integrate the process standards throughout the materials. In the Teacher Toolbox in the Process Standards tab, the materials list the Mathematical Process Standards in related groupings with guidance for the teacher. For example, Process Standards - Analyze Relationships to Communicate Ideas lists A and F with integration for grade 2 in the Represent Numbers to 1,200 scope as "Connections are made between individual units and the base ten blocks. Students have been using individual units to compose a ten. By connecting this prior knowledge, students will be able to use base ten blocks as a representation of numbers up to 1,200."

Productive Struggle

6.1	Student Self-Efficacy	15/15
6.1a	Materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics.	**3/3**
6.1b	Materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems and complete tasks.	**6/6**
6.1c	Materials are designed to require students to make sense of mathematics through doing, writing about, and discussing math with peers and teachers.	**6/6**

The materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics. Materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems and complete tasks. Materials are designed to require students to make sense of mathematics through doing, writing about, and discussing math with peers and teachers.

Evidence includes, but is not limited to:

Materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics.

- The materials include routine practice opportunities, daily assessments, and open-ended questions that allow students to explore different pathways to a solution. The materials encourage students to explain their reasoning for their strategy and consider alternative approaches to make sense of math and make connections. The materials also include open-ended questions: *"How can you make sense of this problem? How might you look at the situation another way? How can you draw on your problem-solving strategies? How can you look at this problem from a fresh perspective?"*
- The materials guide teachers to foster classroom environments that support students in developing a mathematician's mindset. One habit of mathematicians is persevering through challenging tasks, which encourages a growth mindset. The materials in the grade 2 Launch into Grade 2 scope state, *"Tasks in this scope and future scopes provide students with appropriate challenges, encourage perseverance in solving problems, and support productive struggle in mathematics."* For example, the Explore activities include routine practice opportunities and daily assessments (Exit Tickets) requiring students to persevere through problem-solving as critical in demonstrating depth of understanding, thinking mathematically, and making sense of mathematics. In the grade 2 Explore 2 - Count Organized Collections within 1,000 in the Represent Numbers to 1,200 scope, the Exit Ticket shows an image of a collection of seeds. Students are to represent the total in multiple ways (hundreds, tens, ones) and then decompose and compose the number in two ways.
- The materials include opportunities for students to make sense of mathematics using various strategies and stimuli. The Explores include guiding questions, a Life Connection, and a task

or problem for students to think deeply about, work through with manipulatives, and transition to abstract representations. For example, in the grade 2 Data Analysis scope, the Explore 2 - Organize Data Using Bar Graphs activity has students help the principal share fun facts about the class using various graphs. Another example is in grade 2 Life Connections under Elaborate for the Data Analysis scope; students view a video related to various ways scientists use data to draw conclusions, placing a focus on the importance of the data presentation. Students then use their data collection to create a graphic representation. "Life Connections is meant to be an avenue that introduces your students to careers and everyday life experiences that highlight the mathematical concepts being learned in the classroom."

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

- The materials support students in understanding there can be multiple ways to solve problems and complete tasks. For example, in the grade 2 Daily Numeracy scope, the Not Like the Others activity, students observe an image silently. The teacher then guides their thinking by asking, *"What do you notice? Which one is not like the others? What characteristic makes it different? How are these objects similar? Do you see another object that is not like the others?"* Students agree or disagree with their peers and justify their thinking. This shared discussion allows students to understand the similarities and differences in the problem-solving strategies of their peers.
- The materials include Problem-Based Tasks under Elaborate that require students to work collaboratively to solve a problem and discuss how different groups tackled the challenge in various ways. For example, in the grade 2 Add and Subtract Three-Digit Numbers scope, students use various addition and subtraction strategies to solve problems. Students share their strategies, ask each other questions, and make connections. The students discuss what strategy seems to help them the most.
- The materials include lessons and tasks that require students to explain or justify that there are multiple ways to solve a problem. For example, the grade 2 Area scope, Explore 1 - Cover Rectangles with Squares Student Journal page, provides a space for written reflection on the task. Questions include, "Why is it important for the tiles to be lined up neatly, with no gaps or overlaps? Explain how you found the total number of squares needed to cover a rectangle, requiring students to explain their answers and justify their responses by using the manipulatives as evidence.

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 opportunities for students to make sense of mathematics through doing. Students engage in hands-on activities to develop their understanding of the lesson's key concepts. For example, in grade 2 Explore 2 - Compare and Order Numbers in the Compare and Order Numbers scope, students work with a partner to build numbers using

base ten blocks, compare them, write or record the activities on their handout, and then discuss the strategies they used with the class.

- The materials include opportunities to make sense of mathematics through writing. Students use My Math Thoughts under Explain to discuss their thinking with a partner before writing. For example, in the grade 2 Compare and Order Numbers scope, students use a handout with a table representing the number of cans collected by different grade levels. The students solve for the missing numbers following the hints given. They complete the table with the missing counts, order the numbers from least to greatest, generate two numbers more than and less than 1,097, and record how they feel about the concepts taught within the scope. In the grade 2 Length scope, Explore 3 - Distance on a Number Line requires students to use a number line and centimeter cubes to mark the distance a frog jumped. Students use the Reflect portion of the Student Journal to answer questions by writing their responses, including "How did you use the number line to find the distance for each frog? Which frog won the contest?"
- The materials include opportunities for students to make sense of mathematics by discussing concepts. Each Explore includes Math Chats at the end of the lesson with opportunities for students to share in discussions about the lesson's concepts with their peers and the teacher. For example, the Math Chat in the grade 2 Numbers on a Number Line scope, Explore 2 - Points on a Number Line, provides whole-group discussion questions with student exemplar responses. Students review their work and that of their peers to make sense of mathematical concepts with questions such as "What happens to the value of the numbers on the number line as we go from left to right? What happens to the value of the numbers on the number line as we go from right to left?"

Productive Struggle

6.2	Facilitating Productive Struggle	10/10
6.2a	Materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications.	**6/6**
6.2b	Materials offer prompts and guidance to assist teachers in providing explanatory feedback based on student responses and anticipated misconceptions.	**4/4**

The materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications. Materials offer prompts and guidance to assist teachers in providing explanatory feedback based on student responses and anticipated misconceptions.

Evidence includes, but is not limited to:

Materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications.

- The Math Chats in each Explore include specific questions that prompt explanations, arguments, and justifications. Students answer questions with explanations, engage in discussions with their peers to agree or disagree and justify their responses verbally and with representations or manipulatives if needed. For example, the grade 2 Explore 1 - Organize Data Using Pictographs Math Chat in the Data Analysis scope asks, "What do you notice about the strategies each student used to solve each problem? What do you notice about the strategies each student used to solve each problem? What prior knowledge helped you identify the different strategies each student used to solve the addition problem?"
- The Math Story in the Elaborate section supports teachers in guiding students to share and reflect on their mathematical approaches through explanations, arguments, and justifications. For example, the grade 2 Numbers on a Number Line scope presents students with the story Fairy-Tale Forest. In the story, students use an open number line to mark the distance of the mushroom patch, the rainforest, and the field of flowers from the castle. Students discuss solutions, work with a partner to solve the problems in the story, and then share the solutions with the class and justify their work.
- The materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations. The procedure and Facilitation section in each Explore includes clear, well-constructed instructions, questions, and prompts to facilitate student sharing and reflecting on their problem-solving approaches. For example, in Explore 2 - Points on a Number Line in the grade 2 scope Numbers on a Number Line scope, the materials incorporate opportunities for students to explain how a number line is used to determine the missing numbers while justifying their solution and explanation.

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

- The materials include prompts and reflective questions that guide teachers in giving feedback to students, including the use of models to explain student thinking. For example, the grade 2 materials provide Math Chats with scripted multi-leveled questions with exemplary answers. In the grade 2 Fractions scope, Language Supports in Explore 2 - Examples and Nonexamples provide teachers with the following support, "Read aloud the sentence frame provided in the Student Journal. Emphasize the word because it is a way to connect their reason to their response. Encourage students to use this text structure as they develop their response to the final reflection question on the Student Journal. Students should state their response and support it with reasoning."
- The materials provide explanatory feedback for teachers to respond to student responses. For example, in grade 2 Represent Numbers to 1,200 scope, the Decide and Defend activity gives teachers a rubric to gauge the student's level of understanding while responding to and completing teacher-directed tasks. The rubric provides the following intervention guidance: "Once student data has been collected after the assessment, refer to the Scaffolded Instruction Guide in the Home section of this scope to differentiate instruction for each student." The materials include Instructional Supports for teacher feedback with each Explore. For example, one of the Instructional Supports found in Explore 2 of the grade 2 Data Analysis scope states, "Students may benefit from seeing examples of bar graphs prior to completing their Student Journals. Consider printing the slide for the term bar graph from the Picture Vocabulary element under the Explain tab and posting it in a place where students can easily reference it throughout the Explore."
- The Content Support found in every scope under Home lists possible student misconceptions and provides prompts and guidance for the teacher. For example, in grade 2 Represent Numbers to 1,200 scope, the Content Support section Misconceptions and Obstacles lists the following misconception: "Students may not recognize 0 as a number and may not use it to hold a place." Additionally, later in the grade 2 Data Analysis scope, the Misconceptions and Obstacles lists anticipated misconceptions, including "When interpreting a pictograph, students may think the larger the picture is, the more data it represents. Students may misunderstand scaled intervals on bar graphs and treat all intervals as having a size of one...Students may be confused about what mathematical functions to use when joining, separating, and comparing data."