IMRA Review Cycle 2024 Report

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

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 **1**

Public Feedback

Flags for Suitability Noncompliance **0**

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

Alleged Factual Errors **0**

Public Comments **0**

Quality Review Summary

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

Strengths

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

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

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

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

Challenges

- No challenges in this material

Summary

Accelerate Learning's *STEMscopes Texas Math* is a Mathematics K–5 program. The materials promote conceptual understanding of mathematics through hands-on exploration, inquiry, and analysis using the research-based 5E + IA model (Engage, Explain, Elaborate, Evaluate, Intervention, and Acceleration). It offers vertically aligned instructional materials that cover all TEKS and ELPS. The materials support students by building concrete understanding before transitioning to representational models and abstract representations. 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 the 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 explorers 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 of 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, "Each scope in grade K 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. Each scope builds on the last, ensuring students develop a robust and interconnected understanding of mathematics from the start."
- A progression chart within the Course Rationale displays how the major mathematical concepts connect across and within the units and includes the TEKS and Connecting Standards.

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

- The "Implementation Guide," "Vertical Alignment Charts," and "STEMscopes Math Philosophy: Elementary" provide a full course overview. Access is available for the "STEMCoach in Action" resource page with professional development opportunities to support students and provide teacher guidance.
- 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 provides a synopsis of each available component to guide administrators and instructional coaches to support teacher implementation of the curriculum.
- 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 of the concepts, strategies, and academic vocabulary. For example, in a grade Kindergarten scope for Compare Numbers to 10, the materials provide the following background knowledge, "By the end of prekindergarten, students know how to count to 10 using concrete and pictorial models. They have experience with counting to 10 with one count per item, demonstrating that the last count tells how many items were counted. They can look at two groups of items and be able to tell how many items are in each group. They can answer 'How many?' questions when looking at objects arranged in a line, an array, or a scattered configuration. Students are also able to understand the meanings of less than, greater than, and having an equal amount when comparing quantities."
- 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 have access to 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 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 Kindergarten scope on Count Objects, the Take-Home Letter explains, "Your student is about to explore Count Objects. To master this skill, your student will build on their knowledge of counting using one-to-one correspondence. As your student extends their knowledge of this concept throughout kindergarten, 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 Kindergarten data analysis "Tic-Tac-Toe: Try This at Home" contains eight choices for students to complete, including a toy sort, a sidewalk graph, and a question of the day.

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 (SEs), 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.
- Instructional Support in each scope supplies options for the teacher with students who need extra assistance. For example, in grade Kindergarten, Two-Dimensional Shapes – Explore 2 – Classify and Identify 2-D Shapes, "If students need additional support visualizing the two-dimensional shape, have students trace around the shape with a marker or crayon. This should help them match the dollhouse piece and the picture of the shape."

- The Language Supports section in the activities includes tasks and questions designed to develop language and directly align with the ELPS. For example, a Kindergarten Explore 2 activity for the Count Objects scope includes suggestions such as "Actively monitor group work to make sure all students have the opportunity to speak and count out loud before recording by asking probing questions such as the following: How many __ are there? Count them out loud for me. Allow students to count in their native language to check. After they count, you or a student can count in English and have them repeat."
- In the Evaluate tab of the scope, teachers access various assessments. The assessments 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.

- 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.
- The suggested timing for each component varies from lesson to lesson. For example, in the grade Kindergarten Personal Financial Literacy Scope, the timing for the whole group lesson on Day 1 is 15 minutes, while it is 45–60 minutes on Day 2. 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 arrow to access various items related to the scope that include 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, grade Kindergarten Day 1 in the Two-Dimensional Shapes unit suggests "Warm Up Options for 5–10 minutes, Whole Group instruction for 15 min, Small Group for 30–45 minutes, and Assessment Options for 15 minutes."
- The Suggested Scope Calendar offers practice sessions divided by student mastery level with suggested time 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 K Personal Financial Literacy scope, Explore 1 – Wants and Needs lesson, the required materials include "1 student journal (per student), 1 exit ticket (per student), 1 messy room story mat (per pair)."
- Within each scope, teachers use the Explore dropdown to access the individual lessons of the scope that include a description of the lesson, a list of Mathematical Process Standards in the

lesson, printable materials for the teacher and students, reusable manipulatives, and how to prepare for the lesson.

- The Preparation section provides student support materials and technology. For example, in the Kindergarten scope Compose and Decompose Numbers to 10, Explore 3, states, "For students who need more support in recalling information, please see our Sharing Mat Supplemental Aids element 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 (Linking cubes)."

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 Kindergarten scope on Compose and Decompose Numbers to 10, a student that 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), Connection Station (15–30 minutes), 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 Kindergarten materials has an Acceleration tab, which includes a student choice board for extension activities. For example, the Personal Financial Literacy scope choice board has options connecting the scope to life, reading, social studies, art, vocabulary, and writing. 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.
- Enrichment lessons and activities are under the Intervention tab in each scope and provide support for the teacher and students in the small-group lesson setting. The Intervention tab provides a materials list, supplemental aids, a teacher observation checklist, a check-up activity, and guiding questions.

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, but "Kindergarten and 1st grade do not receive Quantile® measures." 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 the grade Kindergarten scope Count Objects, the Pre-Assessment or diagnostic assessment, students find how many pieces of

candy are in a bag. Students count the pieces using a 1-1 correspondence with a partner. The teacher then leads a discussion and asks, "How did you count each bag of candy? How many pieces of candy are in this set? How do you know? Show me how to write the number _____." If the students struggle with this task, the assessment guides the teacher to "do the Foundation Builder to fill the gap in prior knowledge before moving on to other parts of the scope."

- 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, Show-and-Tell, and Technology-Enhanced Questions. Benchmark Assessments include a Post-Assessment given at the end of the year. The Show-and-Tell assessment contains a rubric. Teachers use the assessment as a diagnostic or summative assessment and complete the assessment individually or in small groups. The teacher will use prompts and manipulatives. The Show-and-Tell assessment provides Teacher Prompt Cards, providing various questions to ask students. For example, in the grade Kindergarten Three-Dimensional Solids Scope, Teacher Prompt Card 1, question number 2 states, "Ask, ‘Where is the sphere?’ Have the student point to the sphere." In the grade Kindergarten scope for Compose and Decompose Numbers to 10, the Show-and-Tell for the scope states, "Students are prompted to complete several tasks by the teacher" such as composing the number 8 when they start with the number 4, "and their performances are assessed using a rubric. In the Skills Quiz for the above unit, the students are given a handout with ten cars. They are asked to color them two different colors and then count how many are of each color." 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, including Structured Conversations, Exit Tickets, Show What You Know, Observation Checklist, Skills Quiz, and Small Group Intervention Checkups. For example, in a grade Kindergarten scope for Compare Numbers to 10, students complete the Exit Ticket associated with the Explore 1 activity. "Students generate a set that represents a number that is more than, less than, and equal to a given number up to 10. They generate a number that is one more or one less than another number up to 10." 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. The 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 is in the Assessments section in the Suggested Scope Calendar for each scope, which lists the variety of assessments available in that scope and the purpose for each. For example, in a grade Kindergarten scope for Compose and Decompose Numbers to 10, the materials list a Small-Group Intervention-Checkup (Formative assessment) and explain it is "an independent practice assignment to assess student mastery of the content after the small-group intervention."
- Under the Evaluate tab, the Skills Quiz assessment is "a short, standards-based formative assessment to determine student mathematical fluency with the key concepts in the scope." The materials allow teachers to use this assessment in various ways. For example, the grade Kindergarten Skills Quiz in the Three-Dimensional Solids Scope states, "Assessments can be completed independently, in a small group setting, or one-on-one to check for mastery." In a Show-and-Tell assessment, "Students are prompted to complete several tasks by the teacher, and their performances are assessed using a rubric." Another example in the same grade Kindergarten scope lists a formative assessment, Show What You Know, which provides the purpose as "An independent practice assignment that allows students to demonstrate their learning."

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 within each scope. For example, in a grade Kindergarten scope for Compare Numbers to 10, the materials provide the steps for Preparation and Procedure and Facilitation Points for the Observation Checklist, including a rubric to ensure comparisons of students to the same standards of expectations. In the grade Kindergarten Money 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.
- In the grade Kindergarten scope, Compose and Decompose Numbers to 10, the Show-and-Tell assessment, found under the Evaluate tab, provides teacher guidance on implementation to ensure consistency and accuracy. For example, the instructions state, "1. Meet with each student or group of students separate from the class. 2. Read each Teacher Prompt card and observe each student as they follow the directions. 3. Ask students to record their thinking on the Student Cards (if applicable). 4. Evaluate each student’s performance of the task using the Interview Rubric."

- 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 Kindergarten Money scope, the teacher prepares for the quiz by completing the instructions: "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." Materials include teacher guidance for the use of assessments. For example, the grade Kindergarten Three-Dimensional Solids Scope provides a Tips and Tricks section that gives assessors ideas on using the data extracted from the assessment. For example, "data from this assessment can be used to provide specific support and intervention."
- A Procedure and Facilitation Points section provides teachers with step-by-step directions to administer the assessment. For example, in the grade Kindergarten Three-Dimensional Solids Scope, under the Evaluate tab in the Skills Quiz section, the instructions state, "1. Distribute the Student Handout to each student. 2. Prompt students to show what they know in completing the assessment. 3. Allow students to reflect on their performances using the Heat Map. 4. 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."

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 Kindergarten scope Compare Numbers to 10, the diagnostic assessment tests for the student's understanding of more than (up to 5) and recognizing the number of structured arrangements up to 5 to support the K.2DEFGH TEKS. "Students instantly recognize the quantity of a small group of objects, both in organized and random arrangements. Students create concrete and pictorial sets to show they understand the concepts of greater than, less than, and equal to for a given set of objects up to 10. In addition, students generate a number that is more than or less than a given set of objects up to 10. They extend this concept to written numerals. Students demonstrate that they can utilize comparative language when comparing sets or numerals up to 10." The Observation Checklist, a formative assessment in a grade Kindergarten scope for Count

Objects, provides a detailed rubric for taking anecdotal notes for each student during the specific scope and lists the TEKS and process standards that are covered within the scope.

- The materials list the Mathematical Process Standards and the TEKS to verify alignment. For example, the grade Kindergarten Two-Dimensional Shapes Scope states the TEKS in the Home tab. The Skills Quiz has a corresponding Heat Map that includes the state standards (K.4: Identify U.S. coins by name, including pennies, nickels, dimes, and quarters). For example, the grade Kindergarten Money scope Heat Map directions say, "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." In a Kindergarten scope, Compose and Decompose Numbers to 10 covering the TEKS K.2I, "compose and decompose numbers up to 10 with objects and pictures," the Show-and-Tell summative has students composing and decomposing the number 8.

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

- The Teacher Toolbox includes Lesson Planning Resources under the Essentials tab and 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 answers, sequence, griddable, fill-in-the-blank, sorting, and bar graph." Teachers and students 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 Kindergarten scope Count Objects, the Explore 1, Day 1 and Day 2 formative assessments use Structured Conversations with open responses for students to share their thinking with a partner, group, or class. Explore 1, Day 3 formative assessment is an Exit Ticket where students use text entry to write the number of items in the boxes.
- Each Explore includes built-in formative assessment opportunities at varying levels of complexity to serve as a Check for Understanding. For example, in the grade Kindergarten Money scope Explore 1 - Sort Coins, the Check for Understanding includes questions at the depth of knowledge (DOK) levels 1, 2, and 3. The grade Kindergarten scope for Three-Dimensional Solids, Explore 2: 2-D Parts of 3-D Solids, provides a Math Chat opportunity composed of one DOK level 1 question, one DOK level 2 question, and three DOK level 3 questions along with suggested student responses. Materials provide opportunities to move between levels of complexity. For example, in the grade Kindergarten Count Objects scope, the Explore 1: Count Objects within 10 Math Chat includes a DOK level 1 question, "Can you count to ten starting at the number 3 instead of 1?" immediately followed by a DOK level 3 question, "Was this more difficult for you? Why?"

Progress Monitoring

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

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

Evidence includes, but is not limited to:

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

- The 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 The Observation Checklist and lists the standards (TEKS). Teachers have space in the Observation Checklist to interpret and collect information to internalize the next steps. The Observation Checklist provides 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 Data Analysis scope for grade kindergarten contains a Show-and-Tell assessment with a rubric, an answer key, and interventions. "The rubric is broken down into specific student actions to support the teacher in objectively scoring each student's assessment. This specific data also reveals what skills the student may need support with so the teacher can make informed instructional decisions." Intervention strategies assist teachers in providing support for students based on assessment results. The Data Analysis scope for grade Kindergarten Show-and-Tell Intervention states, "If the concern is counting the data (collecting data), take the following step: Practice counting with a ten frame, number line, or flashcards with a certain number of objects on them." The materials guide how to interpret and respond to students' assessment performance. For example, in the grade Kindergarten scope Compose

and Decompose Numbers to 10, the Show-and-Tell Procedure and Facilitation includes the instructions: "Evaluate each student's performance of the task using the Interview Rubric. 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." For teachers using standards-based grading material, suggest taking "anecdotal notes provided on the Teacher Handout" to collect documentation.

- 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. The last Procedure and Facilitation point in the Data Analysis scope for grade Kindergarten 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 Kindergarten scope Compose and Decompose Numbers to 10, 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 meets level: Elaborate-Math Story (30–45 minutes), Elaborate-Problem-Based Task (30–45 minutes), Elaborate-Fluency Builder (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 materials provide acceleration practice suggestions for students at the "masters" level. The grade Kindergarten Money scope provides practice for meets-level students in the Elaborate Tab - Math Story (30–45 minutes), Problem-Based task (30–45 minutes), and Fluency Builder (15–30 minutes).
- Following Explore 1 in the grade Kindergarten 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, "Wants and needs can vary by region and culture. It may be helpful to introduce the vocabulary (wants, needs) and discuss how needs are essential for survival. Provide examples and non-examples of both wants and needs." Materials suggest the teacher "refer to the Scaffolded Instruction Guide found in the Home section to provide an 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 the grade Kindergarten Count Objects scope, one suggestion states, "If students need additional support filling the bags with the correct number of manipulatives, model a think-aloud strategy. Look at the bag and read the given Number Card. Use a number path to point and count to identify the number in the bag. Once identified, model picking up one manipulative at a time, counting it, and placing it in the bag until the correct number is collected." 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 kindergarten student scores in the 25–50 percentile, the teacher may choose from multiple lessons, including Skill Basics: Identify Three-Dimensional Solids and Their Attributes Using Formal and Informal Geometric Language. 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 Kindergarten Count Objects 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 Kindergarten Money 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 instructions provide steps for completion, students track their scores on assessments, and 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." The grade Kindergarten Money 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 reflect on their knowledge by answering two questions, "I think I did well on... and I need to work on..." 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 an activity for teachers to use with students still struggling with understanding the standards and objectives. For example, in the grade Kindergarten scope "Compose and Decompose Numbers to 10," the "Small Group Intervention" Activity has teachers use counting bears and a sentence stem to compose and decompose numbers 6, 7, 8, 9, and 10, along with writing the different combinations on a whiteboard. 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. For example, in the grade Kindergarten scope, "Compare Numbers to 10," if students struggle with the vocabulary terms more and less, the materials suggest, "Using hand motions, say the words more/greater than with arms wide open and less/fewer than with hands close together. Work with students to make vocabulary posters with examples of more/greater than and less/fewer than." 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 Kindergarten "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 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 Measures of Academic Progress Growth (MAP) 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 Kindergarten Three-Dimensional Solids scope provides activities for students who score in the 0–25% level. These options include "Data Science," "Daily Numeracy," and "Virtual Learning."

- 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 the Kindergarten scope 'Counting Objects,' the "Instructional Supports" state, "If students need additional support with sets of objects six and higher, consider providing bags with just five or fewer items and building a solid foundation with five, including using five frames to help organize the count. Then, as students are ready, introduce 6 to 10 items." 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, in the grade Kindergarten, "Three Dimensional Solids" scope materials provide "Picture Vocabulary," an "Interactive Notebook," and a "Fluency Builder" option for teaching and reteaching low-scoring objectives.

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 Kindergarten scope for "Compare Numbers to 10," 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, as part of pre-teach and vocabulary review, "Picture Vocabulary" features an editable Google File to present words with visuals in both English and Spanish.
- 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 Kindergarten "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 Kindergarten "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

kindergarten "Data Analysis" scope, the "Implications for Instruction" states, "Students have experience with real-object graphs, but this is the first time students are asked to create a picture graph. Multiple experiences with converting a real-object graph into a picture graph can help students make the connection between the two types of graphs."

- 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 Kindergarten scope for "Compare Numbers to 10," the "Procedure and Facilitation Points" guide the teacher to have the following conversation with the students before reading the scenario for "Part I: Generate a Set More or Less," "Help students access the task by asking the following guiding questions: a. Have you ever generated sets or numbers before? b. What do you think it means to generate? c. Have you ever gone on a picnic or camped outside? d. What was it like? e. What is your favorite type of food to eat on a picnic or while camping?"

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

- The "Suggested Scope Calendar" recommends practices that enable students to showcase proficiency in grade-level content and skills. For example, in the grade Kindergarten Data Analysis scope, students who meet or master grade-level proficiency complete provided 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 the "Independent/Guided Practice" section, 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 Kindergarten scope for "Compose and Decompose Numbers to 10," the materials guide teachers, "If students need an additional challenge, draw a dock onto the pond and have students decompose seven into three groups: in the pond, on the land, and on the dock." 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, in the grade Kindergarten "Measurement" scope, a differentiated extension of the "Problem-Based Task- Measure Matchup" has 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 Kindergarten and grade 1 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, and the Procedure and Facilitation sections support the teacher in modeling, explaining, and communicating the concepts directly and explicitly. For example, in the Kindergarten scope for Compose and Decompose Numbers to 10, Explore 1: Compose and Decompose 6, teachers will "Project the Student Journal on the board. Model for students using two different colors of crayons to compose/decompose the number six on the Student Journal. Read and complete the sentence below the first set of cubes. Instruct students to complete the rest of their Student Journals on their own while they continue to explore ways to compose and decompose six with the linking cubes. Demonstrate how to lay the cubes above the line to help students visually check that they are composing numbers that equal six." 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 5E'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 Kindergarten Personal Financial Literacy scope, Explore 1 has guidance such as, "Direct students' attention to the Messy Room Story Mat and dry-erase markers... After students have completed their Student Journal, bring the class back together as a whole group." Materials include prompts and guidance to support the teacher in explaining the concepts. For example, Procedure and Facilitation Points in the grade Kindergarten Explore 1 (Three-Dimensional Solids scope) materials provide clear, step-by-step directions to guide the teacher in explaining and communicating the concepts, including questions at various DOK levels.

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, under the Explore tab (Skills Basics), the Procedure and Facilitation Points in the grade Kindergarten Measurement scope provide clear, concise, step-by-step directions to facilitate the lesson and questions of varying DOK levels, along with sample student responses to mitigate confusion. In addition, a prepared slideshow, also available in Spanish, provides drawings of real-life relatable objects to engage students in academic questions about measurement.
- Teachers access 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 Kindergarten Personal Financial Literacy scope Show What You Know-Part 2, students must draw a picture of a want and a need.
- 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 the Kindergarten Personal Financial Literacy scope, Explore 1: Wants and Needs states, "plan to have students work in pairs to complete this activity." Throughout the Explore, teachers find guidance, such as allowing students to work with partners, check with partners for correctness, or complete the anchor chart as a class in the Post Explore section. The Preparation section gives teachers guidance and recommendations for effective lesson delivery. Teacher materials provide a variety of options for students to apply the concepts learned. For example, the grade Kindergarten Measurement scope offers whole group opportunities, such as the Hook-Greater Capacity activity, providing a video and DOK questions to discuss as a group. The small group activity Explore 4- Compare Weight lesson in the same scope provides opportunities for students to work in groups of six to use balance scales and weigh various materials. Individual tasks in the scope include the completion of the student Interactive Notebook and Compare Weight Exit Ticket, allowing students to show mastery of the concept.
- The Explore activities in each scope provide a variety of 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 Kindergarten scope for Compare Numbers to 10, the Explore 2 activity begins with students exploring stations with a partner. Once they have completed the task with their partner, the teacher brings the class together as a whole group to discuss the task, share strategies, and check for understanding. After completing the Explore activity, the Suggested Scope Calendar under the Home tab guides the teacher to use Small Group Practice, with both Independent and Guided Practice activities.

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 Kindergarten Represent Numbers to at Least 20 scope, Explore 1 Count Objects, 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 in each activity guides the teacher to help students build their academic vocabulary. For example, in Kindergarten Compose and Decompose Numbers to 10, Explore 3: Compose and Decompose 8, the Language Support states, "Provide students with illustrations or examples of non-math terms and phrases used in this activity: in front of, behind, push, pull, train cars, and train engine. Model correct pronunciation of each phrase, and have students repeat as needed."

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 Kindergarten 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 for emergent bilingual students. The document explains that 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 Kindergarten Compose and Decompose Numbers to 10, Explore 1: Compose and Decompose 6, the Language Support states, "Build background knowledge and make connections prior to describing the scenario. Project a picture of a bakery and some cupcakes, and discuss students' experiences in that setting." and "Encourage each student to explain their thinking to a partner, then share their partner's idea with the class. They can ask their partner for support as needed. The following sentence stems may also be helpful: First, we ____. Then, we ___. We noticed that ___."
- 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 Kindergarten Money scope, Explore 1: Sort Coins, the language supports include the sentence stems, "The coins are ___ in this group. I sorted by ____. I notice these coins are all ____." 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 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, the grade Kindergarten Three-Dimensional Solids scope, the Explore 3 Classify 3-D Solids activity provides three sentence stems to assist with

written and oral communication: "I noticed that __. I sorted them by __. They are the same because __."

- 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. For example, in the grade Kindergarten Money scope, Explore 2 Language Support states, "For Spanish-speaking students, point out the Spanish cognate for cents is centavo when describing the value of coins. Also, you can utilize el valor when speaking about value."

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, the grade Kindergarten Two-Dimensional Shapes scope materials for Skill Basics - How to Sort Objects include a sorting by attribute activity that reinforces the key learning in a small group setting. Teacher materials provide questions for discussion. The materials identify concepts and solve real-world, relevant tasks and problems-solving situations that align with the TEKS, including concrete representations. For example, in the grade Kindergarten Two-Dimensional Shapes scope, the materials for Show What You Know - Part 2: Classify and Identify 2-D Shapes provide opportunities for students to analyze a design and identify the various quantities of circles, triangles, squares, and rectangles.
- 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 a grade Kindergarten Data Analysis scope, the materials include guidance that supports a lesson for students to pretend they are the zoologist in charge of the bird exhibit after watching a video clip of a zoologist; "It is their job to collect the correct numbers of birds and create a graph to show the data." The Suggested Scope Calendar for grade Kindergarten Count Objects scope suggests teachers use Daily Numeracy at the beginning of each lesson so students may practice skills based on the grade level TEKS. For example, in Daily Numeracy: Counting, Slide 5, the teacher displays a number line with some missing numbers. The problem states, "Start at the red number and count up to the star," with the starting number at 5 and the star at 20.
- 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 Kindergarten scopes include a Show-and-Tell assessment where "students are prompted to complete several tasks by the teacher, and their performances are assessed using a rubric." In

the grade Kindergarten scope Compare Numbers to 10, the 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 K.2D: recognize instantly the quantity of a small group of objects in organized and random arrangements. The checkpoints include "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 using routines to facilitate structured conversations. The materials for grade Kindergarten Math Charts 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 grade Kindergarten Three-Dimensional Solids scope, the Explore 2 - 2-D Parts of 3-D Solids activity presents DOK Level 1, 2, and 3 questions with suggested student responses that progressively increase in rigor and complexity.
- The materials provide real-world application student tasks that foster critical thinking, problem-solving, and conceptual understanding. In the grade Kindergarten Count Objects scope, students must count forward and backward up to at least 20. Students relate counting to the later scopes, which use counting for comparing, organizing, sorting, and measuring. Questions and tasks in materials increase in rigor and complexity as the learning progression develops through concrete understanding, representation, and abstract thinking. For example, in grade Kindergarten Three-Dimensional Solids scope, the Explore 2 lessons progress in verbiage from sorting to classifying to identifying 3-D solids in the real world. For example, in the Kindergarten Compose and Decompose Numbers to 10 scope, Explore 1: Compose and Decompose 6 students use concrete objects to compose and decompose the number 6, then progress to representing the process pictorially using two different colors and their student journal. Students then engage in a class discussion, sharing their strategies and what they learned. This repeats for the numbers 7, 8, 9, and 10.
- 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 the grade Kindergarten scopes, Evaluate, the materials include a Skills Quiz assessment. Teacher guidance for the assessment includes Procedure and Facilitation Points that provide directions to give students and questions to ask. The Tips and Tricks sections suggest using this assessment as a one-on-one interview-style task.

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. For example, the grade Kindergarten 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 first grade, students define money earned as income and identify income as a way to obtain goods and services."
- 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. In grade Kindergarten Compare Numbers to 10 scope, the section titled Coming Attractions in the Content Support explains, "Students continue to build on this concept as they extend their understanding of comparing numbers. In first grade, students generate a number that is greater than or less than another number up to 120. They also use place value to compare whole numbers up to 120 by using comparative language. In second grade, students generate a number that is greater than or less than another number up to 1,200."
- The materials include a Vertical Alignment for each scope in the Content Support. For example, in the Kindergarten scope for Counting Objects, the Content Support Background

Knowledge explains, "By the end of prekindergarten, students are able to count out loud to 30. They count objects up to ten, using both concrete models and pictorial models." The materials for grades Kindergarten through grade 5 include a scope and sequence, with topics introduced in a logical order. For example, in grade Kindergarten, students begin the year with Count Objects. In this scope, students focus on counting forward and backward up to at least 20. In the second scope, Compare Numbers to 10; students build on their number sense by instantly recognizing groups of objects and beginning to compare groups using concrete objects.

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 K 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. Each scope builds on the last, ensuring students develop a robust and interconnected understanding of mathematics from the start." The materials also include 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 Kindergarten Course Rationale provides a structured table showing the progression of mathematical concepts and a scope and sequence that follows a logical flow of development as each unit builds on the previous. For example, 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." The table shows Compare Numbers to 10 covers the mathematical concepts of Counting and Cardinality, Addition and Subtraction, and Measure and Compare. These three concepts build throughout kindergarten and into future grade levels.
- The grade Kindergarten Course Rationale states, "In Grade K, instructional time will be focused on three areas: (1) developing an understanding of counting by knowing the number names and counting sequence and understanding cardinality by representing the total number of objects in a set; (2) developing an understanding of addition as joining and subtraction as separating by using the meaning of numbers to create strategies for solving problems and the relationship of these operations to counting; (3) identifying objects that can be measured and compared according to their measurable attributes." A table includes the three big ideas and their connectedness throughout the course. According to the table, the grade Kindergarten Data Analysis scope and the Personal Financial Literacy scope connect all three 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 Kindergarten Course

Rationale provides guidance for how the mathematical concepts connect across the units through patterns, big ideas, and relationships. For example, in the grade Kindergarten scope Count Objects, the rationale explains, "Activities in this scope challenge students to apply their counting skills in more complex scenarios, setting the stage for further numerical exploration. Students begin to read, write, and represent numbers up to 20 and apply the principle of cardinality to counting sets of objects. This understanding is crucial to subsequent scopes because students relate counting to the concepts of addition and subtraction and use counting as a basis for comparing, organizing, sorting, and measuring."

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 Kindergarten Data Analysis scope states, "Students have experience with addition and subtraction, but using data in a graph to add or subtract is new to them. Strategies can be taught to help students familiarize themselves with the data before they begin to draw conclusions about the data." For example, students in grade pre-kindergarten learn to count objects up to 10, while in grade kindergarten, students learn to count objects up to at least 20 and compose and decompose numbers to 10. Whereas students in grade 1 learn to compose and decompose numbers up to 120 using concrete and pictorial models. Additionally, in later grade levels, students continue to compose and decompose larger numbers (e.g., 1,200, 100,000) with additional representations, including objects, pictorial models, and numbers.
- The materials connect grade-level content with language both previously learned and to be learned in future grade levels. For example, in grade Kindergarten, students learn to use formal number sense language, including equal to, greater than, more than, less than, and fewer than. In both future scopes and grade levels, students continue using these terms to describe and compare numbers and values. 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 review prior knowledge with pictorial representations and conceptual illustrations, including graphic organizers to introduce new information within a concept. For example, in the Kindergarten Join and Se, students model the action of joining to represent addition and the action of separating to represent subtraction. They solve contextual problems involving familiar scenarios with sums up to 10 and differences within 10. By the end of the unit, students explain the strategies they used to solve addition and subtraction problems by using spoken words, concrete objects, pictorial models, and number sentences. Additionally, in each scope, accessing Prior Knowledge provides an opportunity for students to activate their prior knowledge and concepts from previous and current grade levels with new concepts and procedures. For example, in the Kindergarten Compose and Decompose Numbers to 10 scope, Accessing Prior Knowledge, students use manipulatives to practice a previously learned skill of counting groups and reporting the number counted.
- The materials include pictorial representations and conceptual illustrations, that include graphic organizers and anchor charts, which review prior knowledge while introducing new information within a concept. For example, in the Kindergarten Money scope, Anchor Chart under the Explain tab Explore 1 uses the procedure of building an anchor chart with the class to remind students how they sorted coins. The materials provide an example anchor chart and teacher directions. The materials include using an Interactive Student Journal as part of the lesson procedure. In Explore 1, the student journal provides space for students to make coin rubbings of the front and back of each coin. Students use their journals throughout the unit and the course. 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 Kindergarten Compose and Decompose Numbers to 10 scope, Foundation Builder under the Engage tab, students are engaged in a game where they "work in small groups and count different numbers of items in bags, ranging from 1 to 10. They color in the corresponding box on a game board after they finish counting the items in each bag. When every box on the game board is completely colored in, the group wins the game."
- The Materials demonstrate coherence at the lesson level by connecting students' prior knowledge of concepts and procedures from the current and prior grade level. In kindergarten, students begin with the Count Objects scope, in which they expand their mathematical vocabulary by counting forward and backward up to at least 20. This scope builds directly on students' early years when they recite numbers in sequences or recognized quantities, such as those seen on dice, five frames, or dominoes. 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.

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 questions embedded in the lesson. For example, in grade Kindergarten, the Three-Dimensional Solids scope provides a Spiraled Review - The Airplane Trip to use as a warmup or homework, where students complete questions on counting, adding, shapes, and comparing items in a group, which are skills 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 Kindergarten Compose and Decompose Numbers to 10 scope, students activate their prior knowledge of counting objects before composing and decomposing numbers. Additionally, 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.
- 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 Kindergarten money scope, the spiraled review asks students to identify 2-D shapes, solve a subtraction problem, and compare and order numbers. Step 4 of the Procedure and Facilitation points states, "Refer to the standard listed

in the lower right-hand corner of each question box to assess the students' content knowledge or need for further intervention."

- 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 Kindergarten Compare Numbers to 10 scope, the Spiraled Review - New Car includes four questions, two of which are from the previous scope Count Objects that support TEKS K.2B and K.2C.

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 Kindergarten Compose and Decompose Numbers to 10 scope, students practice composing and decomposing numbers to develop the mathematical concept of number bonds used later in addition and subtraction. The materials include opportunities to revisit concepts in different contexts throughout the lesson. For example, during the grade Kindergarten Data Analysis unit, students must use their knowledge of number concepts and operations to analyze data and draw conclusions using greater than, less than, and equal to as comparisons. In the grade Kindergarten Data Analysis scope, the Content Support under the Home tab includes sentence frames to support student thinking, "___ is greater than ___. Blue (6) is greater than red (4). ___ is less than ___. Red (4) is less than/fewer than green (8). ___ is the same as ___." 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 Kindergarten Data Analysis unit, students must use their previously learned skills from the Addition and Subtraction scope to draw conclusions about graphs. In the grade Kindergarten Data Analysis scope, Explore 3 asks students, "How many people voted for candy and chocolate syrup together? How do you know?" which requires students to add two data points together. 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 Kindergarten Data Analysis scope, Explore 2 students sort and then graph colored fish crackers. Procedure and Facilitation point number five states, "Ask students to use the Real-Object Graph to organize the data for their set of fish... When they are finished, students can compare their real-object graph with their partner's graph." In Explore 5, students draw conclusions from picture graphs.
- The materials provide questions and tasks requiring students to analyze a variety of models and representations for mathematical concepts and situations. For example, in grade Kindergarten Compare Numbers to 10 scope, Explore 2 - Compare Sets, students will "count and compare objects in a set by using comparative language." In this activity, teachers use multiple questions to guide students to interpret, analyze, and evaluate the representations. For example, students answer the following questions: "How many small boxes are there? How many large boxes are there? Which set of boxes has more? How many more? DOK-1 Which set of boxes has less? How many less? Is there anything about the sets of boxes that is the same/equal? How did you figure that out?"
- 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 Kindergarten Represent Numbers to At Least 20 scope, students learn to use tools such as ten frames and counting strips to organize their counts. Students learn about all the counting tools available in the classroom and evaluate which tools work best for them. Students

practice writing a numeral with each picture to keep track of counts and to generate a set of objects when given a number.

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 Kindergarten Compose and Decompose Numbers to 10 scope, students answer questions and complete the tasks of composing and decomposing the numbers 6 through 10 across several Explore activities by consecutively using linking cubes, printed cubes for coloring in journals, and symbols (numbers) to write the different ways numbers are composed and decomposed. Questions in the lesson include, "How are you representing the number of blue cupcakes in the box? How are you representing the number of red cupcakes in the box? How many blue cupcakes are in the box? How many red cupcakes are in the box? What is the total number of cupcakes in the box? How is your box of cupcakes similar to/different from your neighbor's box?"
- In the grade Kindergarten Compare Numbers to 10 scope, students answer questions and complete the tasks of comparing different numbers using linking cubes (interlocking plastic cubes) and chenille sticks (pipe cleaners). Next, students draw a model and write the numbers in the correct boxes to represent the number. Students then use this number to generate a number that is more than and less than, following the same steps. Some questions include, "How many marshmallows did you start with? How does your starting amount compare to the number written on the board? How did you build a stick with more than three marshmallows? How did you build a stick with less than three marshmallows? Did everyone build sticks with the same number of marshmallows? Why or why not?"
- In the grade Kindergarten Money scope, students examine coins with magnifying glasses and create coin rubbings for each front and back using a brown crayon for the pennies and a gray for the nickels, dimes, and quarters. Students use Coin Sorting Mat 3 to make representations of the front and back of real coins, plastic coins, and paper coins.

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

- The materials include questions and tasks that allow students to apply conceptual understanding to new problem situations and contexts. The materials include specific lesson execution examples that support conceptual learning. For example, the first lessons of a unit (scope) always begin with models to support building conceptual understanding. For example, the grade Kindergarten Measurement scope Explore 1 teaches each component of measurement in isolation; Explore 2 uses footprints to compare lengths; in Explore 3, students use different-sized cups to explore and compare capacity, and in Explore 4, students use balance scales to predict and measure the weights of various items to determine which is heavier and lighter.

- The Daily Numeracy for grade Kindergarten 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 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."
- In the grade Kindergarten Compare Numbers to 10 scope, the materials in the Math Chat for Explore 3 ask students, "How is comparing numbers similar to comparing sets? How is it different?" and "Which building or buildings have more stories than the doctor building? What strategy did you use to compare?" In the same scope, students apply what they have learned to an open-ended, real-world challenge where they create a sticker sheet with 1–10 stickers, a second sheet with a different number between 1–10, compare the two numbers, and determine if the second is less than, greater than, or equal to the first.

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 Kindergarten 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 grades K 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 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 Kindergarten Money scope, students practice identifying coins through an interactive game which 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 the Elaborate tab allow students to practice the skills in each scope and become efficient, flexible, and accurate with their mathematical procedures. For example, the grade Kindergarten Count Objects scope includes the Fluency Builder-Count Objects to 10, where students play a game with a partner. In this game, students turn over two cards to find a match. One card is a pictorial model, and the matching card is the numeral. After students have completed the game, they record two of their matches on their handouts. This game allows students to apply the most efficient subitizing strategy while being flexible and mathematically accurate.
- The materials include opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures throughout a unit. The Explore activities include tasks that require students to use manipulatives for hands-on exploration while developing procedural skills and fluency through practical application. For example, the grade Kindergarten Compare Numbers to 10 scope, Explore 2 - Compare Sets activity, students use linking cubes and centimeter cubes to represent two different groups. The students then compare the sets to determine if the first group is more, less, or the same as the second group, regardless of the size of the manipulatives.
- 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 Kindergarten Daily Numeracy activities reinforce and apply previously learned procedures. They include tasks that offer multiple entry points. Students can 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 the lesson. The questions prompt students to think critically about the most efficient approach, evaluate alternative solutions, and apply a procedure to problem situations. For example, the grade Kindergarten Daily Numeracy activities prompt students to solve problems using multiple appropriate strategies. The grade Kindergarten 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, in the Kindergarten Three-Dimensional Solids scope, Problem-Based Task in the Elaborate section states, "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 Math Chats included in each Explore allow for students to evaluate the procedures, processes, and solutions used to develop efficiency, flexibility, and accuracy within the lesson. For example, in the grade Kindergarten Math Chat for the Compare Numbers to 10 scope-Explore 2: Compare Sets, teachers ask students to "share their strategies, and encourage them to ask each other questions and make connections. Encourage them to notice the similarities and differences in the processes they used to compare sets of objects. What is the first thing you had to do when comparing the two sets of boxes? How did you know which set has more? How did you know which set has less? What did you notice about the sets of boxes for task 4? What sets of objects could you compare in real life?" Math Chat includes strategic questions for teachers to use during and after instruction. Questions prompt students to consider alternative strategies, think critically about the most efficient approach, find an alternate solution, and/or apply a procedure to all situations. For example, in the grade Kindergarten Explore 4 Math Chat in the Count Objects scope, students share their thinking with the class. An example of a student question states, "What are some other strategies or tools we could have used?" This question 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 with embedded support refers teachers to Daily Numeracy as a means of providing extra practice that leads students to become increasingly efficient and fluent with the strategies learned. The Content Support in the Home section guides teachers in understanding strategies developed within the materials as well as the learning trajectory from less to more efficient strategies, including why and when certain tools are appropriate and efficient for solving tasks.
- The materials include Skill Basics in Explore, which has Procedure and Facilitation points for explicit modeling efficient strategies. For example, in the grade Kindergarten Money scope, Skill Basics - Identifying Pennies, Nickels, Dimes, and Quarters, teachers will "[hold] up a

penny. While holding the front of the penny in one hand and the back of another penny in the other hand, ask students what they notice about the coin. Remind students that each coin has a front and back that makes it stand out. Tell students the name of the coin. Ask students to repeat the coin's name several times... [then read] the penny chant on the back of the Caller's card as the student holds up the coin." Students learn to view coins not just by size but by the defining features of each coin.

- The materials include embedded support for teachers in understanding strategies developed within the materials and the trajectory of learning from less efficient to more efficient strategies. For example, in the grade Kindergarten Two-Dimensional Shapes scope, Explore 3-Create Shapes provides eight stations and discussion questions. 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. These supports move instruction from concrete to representational to abstract, maintain the rigor of the TEKS, and implement the Mathematical Process Standards.

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, the grade Kindergarten Personal Financial Literacy scope goal states, "Students identify ways their parents earn income or how students can earn income. They understand the difference between working for money as income and receiving money as a gift. Students identify the educational and physical skills needed for certain jobs. They distinguish between wants and needs, as well as identify income as a source to meet those wants and needs."
- 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 Kindergarten Data Analysis scope emphasizes the role data plays in both understanding and representing the world mathematically. With that focus, students learn to collect, sort, and interpret data first using physical objects, helping make mathematics an integral part of daily experiences. After this, students recall counting and comparison skills, apply visual representations of data, draw conclusions, and create a foundation for future data analysis and interpretation.

- The grade Kindergarten 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 Three-Dimensional Solids scope, the Content Support in the Home section states, "Students sort, classify, and identify three-dimensional solids in everyday life, society, and workplace situations, such as sorting bags of recycling, finding the missing parts of toys, rearranging items at a store, and noticing three-dimensional solids around the school." This real-world example supports TEKS K.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 scope materials include hands-on activities with models or manipulatives to represent mathematical concepts. For example, in the grade Kindergarten Data Analysis scope, students use real objects (fish crackers), attribute blocks (foam pattern blocks), and linking cubes to sort objects before graphing the activity data. Additionally, the grade Kindergarten Measurement scope provides hands-on opportunities for students to use various measuring tools to compare item capacity, length, and weight.
- Questions and tasks include the use of pictorial representation (figures/drawings). Lesson materials incorporate detailed drawings and visual representations, symbolic notations, numeric expressions, and algorithms to illustrate concepts. For example, in the grade Kindergarten Compose and Decompose Numbers to 10 scope, students use linking cubes to explore different ways to compose and decompose the number 6. After exhausting those combinations, students create pictorial models using blue and red crayons, complete accompanying sentence stems below each pictorial model and ultimately link pictorial models to more abstract representations of the concept.
- Questions and tasks include the use of abstract representations, and the materials clearly outline how conceptual understanding of key concepts relates to the procedural, which also creates a thorough line of mastery of the abstract. For example, in Explore 4 of the grade Kindergarten Compose and Decompose Numbers to 10 scope, students solve a real-world problem using two-color counters and then the Fruit Snack Story Mat to determine all the different combinations of nine fruit snacks. Next, students complete their handout by drawing a pictorial model using red and yellow crayons. Last, students write the number sentence that matches the model they created. Additionally, students complete these steps to find all the different ways they compose or decompose the number 9.

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, in grade kindergarten, students "begin with the Count Objects scope, in which they

expand their mathematical vocabulary... [this] scope builds directly on the foundation [of] recited numbers in sequence or recognized quantities... then challenged to apply their counting skills in more complex scenarios, setting the stage for further numerical exploration."

- 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 Kindergarten Join and Separate scope, students use virtual two-colored counters and pattern blocks to explore and present their solutions to addition and subtraction problems.
- 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 Kindergarten Three-Dimensional Solids scope, the Life Connections lesson in the Elaborate section allows students to organize 3D boxes into a pantry. 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 Kindergarten Personal Financial Literacy scope, the teacher uses guidance from the materials to create an anchor chart with a wants and needs section. Students add pictures of items they would need and want for a camping trip to the anchor chart. Additionally, the activity provides opportunities to apply new mathematical terms in context with visual support.
- The materials provide opportunities for students to develop their academic mathematical language using manipulatives. For example, in the grade Kindergarten Money scope, the Hook lesson found under Engage begins with the teacher showing the students the phenomena of a jar filled with coins and allowing students to work in groups and hold a jar filled with coins. The teacher holds up a coin and uses DOK level 1 questions for students to name the coin. "DOK-1 What are the objects called that were inside the glass jar? Coins. DOK-1 What are coins? Money. DOK-2 What can you use coins to do? Buy things. DOK-1 Hold up a penny without

saying its name. Ask: What is this called? Penny. Have students find one in their collection and hold it up.[continue with each coin]."

- 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 Kindergarten Three-Dimensional Solids scope, Explore 2 provides 2-dimensional cutouts for students to manipulate as they build 3-dimensional solids. The Language Supports guides the teacher to "point to each solid as you say its name. Pronounce the name slowly so students can hear and understand the different blends or sounds that are used to make each word. After they hear it said, have the student repeat it... Discuss the difference between the terms two-dimensional and three-dimensional when discussing the shapes and solids... To aid students in discussing the shapes that are missing on the solids, provide the following sentence structures: I have a ___. The missing face is shaped like a ___. The missing shape has ___ sides and ___ vertices. I think the missing side is a ___."

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 Kindergarten 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! The materials provide the teacher with support for scaffolding language. For example, in the grade Kindergarten Compare Numbers to 20 scope, the Content Support in the Home section lists potential areas of need in the Misconceptions and Obstacles section. The materials state, "Students may confuse the terms fewer than or less than and greater than. Students may confuse size with quantity... When given two groups of objects to compare, students may add or subtract the groups instead of simply comparing them... Students may see equal as an action. The equal sign shows a relationship and means ‘is the same as’ or ‘is the same value as.’"
- The materials include embedded guidance for the teacher supporting student development and the use of academic mathematical vocabulary in context. 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 1 in the grade Kindergarten Personal Financial Literacy scope, students sort pictures of needs and wants before gluing them into their notebooks.
- 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 in the Explain section 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 Kindergarten 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 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 Structured Conversations. Students engage in discourse about a provided question or prompt using routines that open discussion with students through opportunities, such as 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. Each activity includes a description and Procedure and Facilitation points for teacher guidance.
- The materials include Math Chats, a forum for students to discuss 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, including exemplar student responses. For example, in the grade Kindergarten Compare Numbers to 20 scope, the Explore 4 - Compare Written Numerals Math Chat states, "DOK-2 What does the number you are comparing represent? [student response] The number we are comparing represents the number of apples in each basket. It represents an amount... DOK-4 When would you need to compare numbers in real life? [student response] When my friends and I are playing video games, we have to compare our scores to see who won. The person with the most points is the winner."

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, on a Show-and-Tell assessment in the grade Kindergarten Data Analysis scope in the Evaluate section, students must "(D) Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate and (F) Analyze mathematical relationships to connect and communicate mathematical ideas" after sorting objects, creating a real-object graph, and drawing conclusions about data.
- The materials integrate content and the process standards for lessons. For example, in grade Kindergarten, Two-Dimensional Shapes scope, Explore 1 - Sort 2-D Shapes lists Mathematical Process Standards (A) Apply mathematics to problems arising in everyday life, society, and the workplace, (E) Create and use representations to organize, record, and communicate mathematical ideas, (F) Analyze mathematical relationships to connect and communicate mathematical ideas at the start of the lesson. The lesson begins with a scenario using Mathematical Process Standard (A) to sort given shapes by attributes in line with the scenario presented. Students then use the Mathematical Process Standard (E) to sort selected shapes and then draw those shapes in their Student Journal. Finally, students use Mathematical Process Standard (F) as they engage in a Math Chat at the end of the Explore with their teacher and peers.
- The grade Kindergarten Count Objects scope, Explore 1 - Count Objects within 10 integrates the process standards in each lesson in the Instructional Supports and the Language Supports. For example, Instructional Support 2 incorporates Mathematical Process Standard

(C) and states, "If students need additional support in organizing their items to count, provide a number path. Model for students how to take one item at a time and place it under a number on the number path." The Language Support integrates Mathematical Process Standard (D) and states, "Provide sentence structures for students to use during their group work: I counted ___ objects. I have the number ___. How many ___ do you have?"

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 Kindergarten students "reason about the size of blocks, analyzing the number in each set, and justifying the comparison using comparative language" in the Compare Numbers to 10 scope. In Intentional Selection of Tools and Techniques to Solve Problems (A and C), "[productive] struggle is encouraged as students sort manipulative solids as well as pictures of those solids. Students must wrestle with the thought that a solid is not flat, but a pictorial representation of the solid is flat" in the Three-Dimensional Solids scope.
- The materials include a description of 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 Kindergarten Data Analysis scope, Problem-Based Task under Elaborate - Favorite Shapes.
- Each scope describes how process standards connect throughout each unit. For example, the grade Kindergarten Data Analysis scope Content Support under Home states, "K.1A Apply mathematics to problems arising in everyday life, society, and the workplace: Students analyze data in everyday life, society, and workplace situations such as: organizing supplies, keeping track of classroom fish, sorting buttons, surveying of favorite ice cream flavors, and learning about students favorite things."

- The grade Kindergarten 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 Kindergarten Content Support in the Home section provides each Mathematical Process Standard along with a description of its use in the course: "K.1A Apply mathematics to problems arising in everyday life, society, and the workplace: Students sort, classify, and identify three-dimensional solids in everyday life, society, and workplace situations, such as sorting bags of recycling, finding the missing parts of toys, rearranging items at a store, and noticing three-dimensional solids around the school."

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 Kindergarten Scope and Sequence in the Teacher Toolbox under Essentials and Curriculum Design. For example, the Money scope, Explore 2, supports TEKS K.4A. Identify U.S. coins by name, including pennies, nickels, dimes, and quarters, and the math process standards included are K.1CDFG.
- The materials include strategic questions for teachers to use during instruction. For example, in the grade Kindergarten Explore 5 - Draw Conclusions from Picture Graphs in the Data Analysis scope, the materials include the following teacher guidance and questions, "After the Explore, invite the class to a Math Chat to share their observations and learning. Ask, How did you determine which questions could be answered by each picture graph? How were the picture graphs different? How were the picture graphs the same? What conclusions can you draw from looking at a picture graph?" This Math Chat incorporates Mathematical Process Standards A, B, 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 Kindergarten in Compose and Decompose Numbers to 10 while using physical objects as "Being able to compose and decompose numbers leading to 10 is foundational in the base-10 system. By accessing their prior knowledge of composing and decomposing other numbers less than 10, students are able to analyze and understand by making connections with real-world experiences and scaffolding as needed."

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 provide opportunities for students to think mathematically about the lessons, routine practice opportunities, daily assessments, and open-ended questions. The materials include a Teacher Toolbox with pre-planned student support and planning materials for teachers, including an Intervention tab. The materials also include a Launch scope with guidance for teachers to create a classroom environment where students think mathematically by focusing on the habits of mathematicians, such as "[mathematicians] can make sense of math and see connections to math in the real world" with facilitating questions such as, "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?" Additionally, the materials include Daily Numeracy, Fact Fluency, and Data Science for students to review and implement recursive skills that are not always related to the skill of the daily lesson or scope.
- 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 Kindergarten Launch into Kindergarten 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 Kindergarten Explore 3 - Count Forward and Backward within 10 in the Count Objects scope, the Exit Ticket consists

of three ladders with missing numbers. Students complete the ladders by counting forward and backward to find the missing numbers.

- 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 Kindergarten Data Analysis scope, the Explore activity has students track the fish donated to the classroom aquarium and make connections by sorting fish crackers, creating a real-object graph, and making observations about the graph. In grade Kindergarten Life Connections under Elaborate in the Three-Dimensional Solids scope, students view a video related to groceries and the different sized packaging in the store. Students then organize various items into the pantry based on size and shape. "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 Kindergarten Daily Numeracy scope, Blank Number Line activity, students place numbers on a number line, discuss the relationships between where they positioned the numbers, and then agree or disagree with their peers, along with justifying 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 Kindergarten Data Analysis scope, students survey their classmates to collect data, organize the data, and create a picture graph. Students share and discuss their solutions with the class by explaining how their picture graph was used to solve the given problems.
- The materials include lessons and tasks that require students to justify that there are multiple ways to solve a problem. For example, in the grade Kindergarten Measurement scope, the Explore titled Skill Basics - How to Use a Balance Scale, poses questions allowing students to expand on how they solved the problem. Guiding questions include, "Which object is heavier? How do you know?" requiring students to turn and talk to a partner for discussion, justifying their responses.

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

- The materials 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 Kindergarten Explore 2 - Count Objects and Organize

Counts in the Count Objects scope, students count objects up to 10 using ten frames, counting strips, and circling groups with a partner or group. Students write or record the activities on handouts and discuss their strategies 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 Kindergarten Compare Numbers to 10 scope, students use a handout that includes six stars to solve various problems, then draw a picture to represent the new number. Students complete sentences using mathematical vocabulary from a provided word bank and record their feelings about the concepts taught within the scope. In the grade Kindergarten Measurement scope, Explore 2 - Compare Length requires students to "[compare] the lengths of the suspect footprints with the length of the evidence footprint [then use] the word bank to fill in the table." The table includes space for students to use mathematical terms to craft complete sentences comparing the lengths of two objects.
- 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 key concepts with their peers and the teacher. For example, the grade Kindergarten Math Chat for Explore 2 - Compose and Decompose 7, Compose and Decompose Numbers to 10 scope, lists whole-group discussion questions with student exemplar responses, which include the student's strategy for solving. Students review their work and that of their peers to make sense of mathematical concepts with questions such as "What are all the different ways to compose and decompose 7? When you worked with your pom-poms and story mats, how did you compose and decompose the number 7? Were any of the combinations that equal 7 similar? If so, give an example. What was different when the combinations used similar numbers?"

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 with solutions and strategies, justify their responses verbally, and use representations or manipulatives if needed. For example, the grade Kindergarten Explore 4 Math Chat in the Data Analysis scope asks, "What prior knowledge helped you identify the different strategies each student used to solve the addition problem? How is your survey and picture graph similar? How is your survey and picture graph different? What information can we learn from our graph?"
- The Math Story in the Elaborate section supports teachers to guide students as they share and reflect on their mathematical approaches through explanations, arguments, and justifications. For example, the grade Kindergarten Compose and Decompose Numbers to 10 scope presents students with the story, Saturday at the Panadería with Papá. The boy in the story needs help to understand how to put the orders in two boxes. Students discuss solutions, work with a partner to solve the problems in the story, 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 Explore includes clear, well-constructed instructions, questions, and prompts to facilitate students sharing and reflecting on their problem-solving approaches. For example, in Explore 5 - Compose and Decompose 10 in the grade Kindergarten Compose and Decompose Numbers to 10 scope, the materials incorporate opportunities for students to explain how using a ten frame helps them find all the ways to compose and decompose the number 10 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 Kindergarten materials provide Math Chats with scripted multi-leveled questions with exemplar answers. In the grade Kindergarten Three-Dimensional Solids scope, Language Supports in Explore 2 - 2-D Parts of 3-D Solids provide teachers with sentence stems to "aid students in discussing the shapes that are missing on the solids" to allow deeper explanations of student thinking.
- The materials provide explanatory feedback for teachers to respond to student responses. For example, in the grade Kindergarten Count Objects scope, the Show-and-Tell activity gives teachers a rubric to gauge the student's level of understanding while responding to and completing teacher-directed tasks. The rubric guides intervention that states, "If counting is a concern, take the following steps: Practice one-to-one correspondence with manipulatives. Practice putting objects on a number line or a number path to show cardinality." The materials include Instructional Supports for teacher feedback with each Explore. For example, one of the Instructional Supports found in Explore 2 - Create Real-Object Graphs and Draw Conclusions of the grade Kindergarten Data Analysis scope states, "If students need additional support sorting their fish, ask these guiding questions: How are the fish the same? How are the fish different? How many groups can you sort the fish into?"
- The Content Support found in every scope under Home lists possible student misconceptions and provides prompts and guidance for the teacher. For example, in the grade Kindergarten Count Objects scope, the Content Support section Misconceptions and Obstacles lists the following misconception: "Students may have difficulty counting forward or backward from any number within 20. Provide students with a visual resource such as a number path, number line, or hundreds chart." Additionally, in the later grade Kindergarten Data Analysis Scope, the Misconceptions, and Obstacles list several anticipated misconceptions, stating, "Students may not use a linear model to organize data when using objects... Students may group objects with similar basic attributes incorrectly and not attend to more specific attributes (e.g., grouping all blocks together rather than by size or color)...Students may think that the larger an object is, the more data it represents."