IMRA Review Cycle 2024 Report

Publisher Name	Program Name
Accelerate Learning	*STEMscopes Texas Math*
Subject	**Grade Level**
Mathematics	1

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 **2**

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

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). *STEMscopes Texas Math* 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 materials provide real-life examples of mathematical concepts through hands-on activities, online games, and mathematical vocabulary building with pictures and Spanish cognates. Additionally, the materials include diverse learner supports with resources in both English and Spanish.

Campus and district instructional leaders should consider the following:

- The materials include teacher support for teaching students to understand and communicate mathematics through discourse and writing with arguments, justification, and explanations. These supports are woven throughout the materials, including questioning strategies at different Depth of Knowledge levels, interleaved practice, and spaced retrieval opportunities.

- The materials provide a comprehensive curriculum that includes planning resources, teacher guidance, assessments, and an extensive selection of instructional materials for remediation, on-level instruction, and extension. . Additionally, materials support teacher collaboration within their grade levels and across their campuses, facilitating vertical planning with administrators, academic coaches, and district personnel Teachers may benefit from training on the program components, including navigating the online platform, and support with planning which instructional resources to utilize based on their students' needs.

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

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

- In the "Teacher Toolbox," the program provides a scope and sequence that includes suggested pacing in the form of instructional days to support effective implementation based on a typical 180-day calendar, a 165-day calendar, and a 210-day calendar.

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

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

- The materials include an Implementation Guide, which outlines the components of the materials, the rationale for their order, and how concepts connect throughout the course.
- A Course Rationale is provided that explains the unit order and how concepts to be learned in each unit connect throughout the course.
- A progression chart within the Course Rationale displays how major mathematical concepts are connected across and within the units and includes the TEKS and Connecting Standards. For example, the grade 1 Course Rationale states, "The Add and Subtract within 20 scope extends the arithmetic concepts to a broader range. Leveraging skills acquired in the previous scope [Add and Subtract within 10], students tackle more challenging problems involving larger numbers, which enhances their computational fluency."

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

- Teachers can find guidance in the "Implementation Guide," "Vertical Alignment Charts," and "STEMscopes Math Philosophy: Elementary" for a full course overview. Access is available for the "STEMCoach in Action" resource page with professional development opportunities to support students.
- A Lesson Internalization protocol on the Suggested Scope Calendars guides teachers in internalizing the unit (scope) as a whole and each individual lesson. Additionally, "A PLC Guide to Breaking Down Learning Standards" lists the learning standards and key components to help teachers plan unit or lesson-level activities. Also provided is "A PLC Guide to Breaking Down Learning Standards" download for teachers to list the learning standards and key components and for planning activities in the classroom for a lesson or unit.

- Each scope begins with defined protocols for teaching the scope and includes content support, content unwrapped, scope overview, manipulatives/materials needed, daily objectives, warm-ups, assessment options, and links to the daily detailed lesson plans.
- An independent practice section for each scope (unit) is tailored to student needs with guidance for activities and lessons for students at the masters, meets, and approaches levels. Activities and lessons are also provided for guided practice.

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

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

Intentional Instructional Design

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

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

Evidence includes, but is not limited to:

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

- The Content Support in the Home section provides the trajectory or vertical alignment for the unit, the concept introduction, and coherence. The current scope builds the foundation for later grade levels.
- The Content Support page provides a comprehensive overview of the scope including background knowledge on the concepts, strategies, and academic vocabulary. For example, in the grade 1 scope for Add and Subtract within 20, the background knowledge states "In pre-kindergarten, students use concrete objects, create pictorial models, and share verbal word problems for adding up to 5 objects and subtracting 0–5 objects from a set. In kindergarten, students model the action of joining and separating to represent addition and subtraction. Students explain the strategies used to solve problems involving adding and subtracting numbers within 10 using spoken words, concrete and pictorial models, and number sentences."
- 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, the publisher's philosophy, and materials used to support learning.
- The material includes a Take-Home Letter in English and Spanish for each scope (unit). The letter also includes an overview of the scope, the goal of the unit, academic vocabulary specific to the scope, suggestions for activities to try at home to support their student's learning in the classroom, and how families access the teacher for support. For example, in the grade 1 scope on Add and Subtract within 20, the Take-Home Letter explains, "Your student is about to explore adding and subtracting within 20. To master this skill, your student will build on their knowledge of modeling, solving, and explaining problems when joining and separating up to 10. As your student extends their knowledge of this concept throughout first grade, they will learn the following concepts."
- Student Goal Setting sheets in English and Spanish provide a data tracking tool for students to monitor progress in the classroom, use an "I can" statement for each scope, and share information with families.
- The material includes a "Try This at Home" page in both English and Spanish for each scope (unit). For example, the grade 1 money "Tic-Tac-Toe: Try This at Home" has eight choices, including a "coin trade, coin memory, match my value, and candy store."

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 provided in each scope supplies options for the teacher with students who need extra support. For example, in grade 1, Time, Explore 3 – Digital Clocks and Analog Clocks, "If students need support to write the time in words, make an anchor chart titled Ways to Write Time in Words, and list several examples. Allow students to refer to it as they complete their Student Journals."

- The Language Supports section in the activities includes tasks and questions designed to develop language and directly align with the ELPS. For example, in grade 1, Add and Subtract within 20, Explore 1 – Join and Separate – Result Unknown (to 20), suggestions include, "Have students join and separate with a partner. Have one partner read while the other acts out the scenario on each of the Order Cards. Encourage students to explain their actions to each other. They may use the following sentence frames: "To join, I began with ___ and then counted ___, ___, ___ ...To separate, I began with __ and then counted ___, ___, ___..."
- In the Evaluate tab of the scope, teachers access various assessments. The assessments include an observation checklist, an open-ended assessment, a standards-based assessment, skills quizzes, a heat map for students to track their assessment results and create personalized improvement plans, and technology-enhanced questions. The assessments are available in Spanish and English and align with the lesson's content and language standards of the unit (scope).

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

- The Suggested Scope Calendar in the Home tab for each scope provides recommendations for the required time for each lesson component (warm-up, whole group, small group, and assessment). The suggested timing for each component varies from lesson to lesson. For example, in the grade 1 Personal Financial Literacy scope, the timing for the whole group lesson on Day 1 is 15 minutes, and on Day 2 is 45–60 minutes. The small group lesson on Day 1 is 30–45 minutes, and on Day 2 is 15–30 minutes.
- In the scope, teachers use the Home drop-down to access various items related to the scope, including 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 1 Day 3 in the Fractions unit suggests, "Warm Up Options 5–10 minutes, Whole Group 45–60 minutes, Small Group 15–30 minutes, and "Assessment Options" 5–15 minutes."
- The Suggested Scope Calendar offers practice sessions divided by student mastery level with times for individual practice.

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

- Each scope includes a lesson overview listing the necessary files to download or print for teachers and students (available in both English and Spanish). For example, grade 1, Personal Financial Literacy scope, Explore 1 - Income lesson plan, each student has a journal and exit ticket. Within each scope, teachers use the Explore drop-down to access the individual lessons of the scope, which include a description of the lesson, a list of Mathematical Process Standards in the lesson, printable and reusable materials for the teachers and students, and how to prepare for the lesson.
- Student support materials and technology are in the "Preparation" section. For example, in the grade 1 Addition and Subtraction Strategies scope, Explore section, Skill Basics - Strategies to

Use to Subtract within 20 activity, "Plan for students to work in pairs to complete this activity. Put 20 counters into a resealable bag for each pair. Print the Double Ten Frame for each pair of students. Prepare a whiteboard and dry-erase marker for each student. Prepare to display or project a Double Ten Frame. Collect 20 counters as a teacher's set."

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 the grade 1 scope on Addition and Subtraction Problem Solving, a student who demonstrates mastery utilizes the Acceleration section and one of the following (available in English and Spanish) during small group or Independent time: "Acceleration - Math Today (15–30 minutes), Acceleration - Connection Station (15–30 minutes), Acceleration- Choice Board (15–30 minutes)."
- The scope-specific "Take-Home Letter" gives families student homework information, explains the unit and suggestions for supporting students at home, and contains a "Tic-Tac-Toe: Try This at Home" choice board where students and their families select activities to complete.
- Every scope in the grade 1 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 home, social studies, vocabulary, the real world, writing, and life. Further extension activities for the whole class or small groups at the mastery level are in the "Elaborate" tab, which includes a Spiraled Review, Problem-Based Tasks, and Life Connections that relate to the scope.
- Each scope's Intervention tab offers enrichment lessons and activities to support teachers and students in small-group lesson settings. The Intervention tab includes 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 a Grade 1 scope for Add and Subtract within 20, students are asked to complete an exit ticket at the end of the Explore 3 activity.

"Students use objects, pictorial models, and number sentences to represent and solve part-part-whole problems within 10." In the same scope, the materials also provide an Observation Checklist so that teachers may take anecdotal notes of students' grows and glows as they progress through 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 a grade 1 scope for Addition and Subtraction Strategies, the Show-and-Tell for this scope states, "Students are prompted to complete several tasks by the teacher" such as solving adding and subtracting number sentences, "and their performances are assessed using a rubric." In the Skills Quiz, students use a handout with multiple addition and subtraction problems and use different strategies to solve them, including Making a ten and Balancing Equations. Technology-Enhanced Questions provide online assessments to mimic state standardized testing (STAAR) by using multiple Technology-Enhanced Question Types. The Technology-Enhanced Questions "allow students to answer question types that are not possible in a paper-and-pencil format," for example, Multiple Answer, Sequence, Griddable, Fill-in-the-Blank, Sorting, and Bar Graph.
- The materials provide a variety of formative assessments found throughout each scope and lesson in Structured Conversations, Exit Tickets, Show What You Know, Decide and Defend, Observation Checklist, Skills Quiz, Mathematical Modeling Task, Skill Reviews, Practice Quick Checks, and Small Group Intervention Checkups and Quick Checks. For example, in a grade 1 scope for Adding and Subtracting within 20, students complete an Exit Ticket at the end of the Explore 3 activity to assess the use of "objects, pictorial models, and number sentences to represent and solve part-part-whole problems within 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 for each scope is in the "Assessments" section in the Suggested Scope Calendar, which lists the variety of assessments available in that scope and the purpose for each. For example, in a grade 1 scope for Addition and Subtraction Strategies, 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." Another example in the same grade 1 scope lists a formative assessment titled Show What You Know, "an independent practice assignment that allows students to demonstrate their learning." Grade 1 Daily Numeracy requires students to model and solve joining, separating, and part-part-whole problems using objects. Instructions and materials in the Daily Numeracy practice allow the teacher to act as a facilitator and record students' responses while gathering baseline data on the student's foundational knowledge or proficiency.
- Under the "Evaluate" tab, the grade 1 Fractions scope Skills Quiz assessment is "a short, standards-based formative assessment to determine student mathematical fluency with the key concepts and skills in the scope." Data assists the teacher by informing instruction, planning, progress monitoring, and making data-driven decisions to provide "specific support and intervention."

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

- The materials provide teacher guidance to ensure consistent and accurate use of the assessments found within each scope. For example, in a grade 1 scope for Addition and Subtraction Problem Solving, 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 1 Money scope, procedure number 2 says, "As students are working through the Explore and Explain activities in the scope, formatively assess their progress by taking anecdotal notes on how key concepts and skills were observed. Reflection questions can be considered to measure the impact of both whole-group and small-group activities." The last procedure refers teachers to the Scaffolded Instruction Guide in the "Home" section to support and differentiate for all students.
- The materials include the Description, Materials Required, Preparation, Procedure and Facilitation Points, and Tips and Tricks for the Skills Quiz found in each scope. In the grade 1 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 as required. Prepare supplemental aids for students who meet eligibility criteria." The last procedure refers teachers to the Scaffolded Instruction Guide in the Home section to support and differentiate for all students. One of the Tips and Tricks included in the grade 1 money skills quiz is for the teacher to assess students one-on-one or in small groups.
- A Procedure and Facilitation Points section provides teachers with step-by-step directions to administer the assessment. In the grade 1 scope, Addition and Subtraction Problem Solving, 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. 5. 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 middle-of-year benchmark assesses a mixture of grade level and prior grade-level standards, and the end-of-year 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 1 scope for Add and Subtract within 20, the diagnostic assessment tests for the student's understanding of adding and subtracting within 10. The TEKS and objectives for this scope explain, "Students build on their understanding of addition and subtraction as they solve real-world problems that involve joining, separating, and comparing within 20. They represent problems using concrete and pictorial models and number sentences. Students explain the strategies used to solve problems using spoken words, objects, pictorial models, and number sentences." The Observation Checklist, a formative assessment in the grade 1 scope for Add and Subtract within 20, 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.
- Mathematical Process Standards and the TEKS are listed to verify alignment. For example, the grade 1 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." The Skills Quiz assesses the identification of U.S. coins, including pennies, nickels, dimes, and quarters, by value and describing the relationships among them with nine questions to support 1.4A TEKS.

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

- The Teacher Toolbox contains Lesson Planning Resources under the "Essentials" tab, which includes a Depth of Knowledge document of activities at varying levels of complexity that guides teachers to activities to "naturally transition students from Level 1 to Level 4, expanding their thinking and deepening their knowledge and skills." Technology-Enhanced Questions are assessments modeled after state standardized testing that offer "computer-based questions [in] formats that allow for non-conventional question types, including

multiple answer, sequence, Griddable, fill-in-the-blank, sorting, and bar graph." Teachers and students can use other assessments for one-on-one testing opportunities, enabling dialogue and clarification.

- The materials for each scope include multiple formative and summative assessments that provide various response options, including multiple-choice, open responses, and text entry. For example, in the grade 1 scope for Addition and Subtraction Problem Solving, the Explore 1 Exit Ticket has students "Represent and Solve All Problem Types" (text entry and open response) as compared to the Technology-Enhanced Questions used as the Formative or Summative Assessment which include drag and drop and multiple-choice questions.
- 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 1 Money scope Explore 1 - Sort and Identify Coins, the Check for Understanding includes questions at DOK levels 1, 2, and 3. The grade 1 Three-Dimensional Solids scope Explore 2: 2-D Parts of 3-D Solids provides a Math Chat opportunity with two DOK level 2 and six DOK level 3 questions with suggested student responses.
- Materials provide opportunities to move between levels of complexity; for example, in grade 1 Add and Subtract within 20 scope, the Explore 1 Math Chat includes a DOK level 1 question, "What strategies did you use to solve the problem?" immediately followed by a DOK level 3 question, "Which strategy was used to perform addition? How do you know?"

Progress Monitoring

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

The instructional assessments include standards-aligned items at varying levels of complexity. Materials provide guidance for the use of included tasks and activities to respond to student trends in performance on assessments. Materials include tools for students to track their own progress and growth.

Evidence includes, but is not limited to:

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

- The Differentiation Pathway found in the Teachers Toolbox guides teachers on 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."
- The scope provides an Observation Checklist and lists the standards (TEKS). Teachers have space in the Observation Checklist to interpret and collect needed information to internalize the next steps. The Observation Checklist 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 1 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 Compose and Decompose Numbers to 120 scope for grade 1 Show-and-Tell Intervention states, "If the concern is identifying a number that is ten more or ten less, take the following step: Add and subtract tens using place value, number lines, number paths, ten frames, or a 120 chart."

- The materials guide teachers to interpret and respond to students' assessment performance. For example, in the grade 1 scope for Add and Subtract within 20, the Show-and-Tell assessment's Tips and Tricks section includes the following guidance: "1. It is recommended for this element to be used in small-group settings or one-on-one with students. 2. A rubric and an answer key are available to support the teacher in evaluating students' work. 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. 3. Intervention strategies are also provided at the end of the rubric. These assist in providing individualized support for students based on the results of their assessments." 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 Compose and Decompose Numbers to 120 scope for grade 1 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 1 scope for Add and Subtract within 10, in the Practice section under the Suggested Scope Calendar, the materials guide the teacher to use the following practice activities if a student is at the approaches-level of proficiency, "Elaborate-Interactive Practice (15–30 minutes), Evaluate-Skills Quiz (30–45 minutes)."

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

- Based on how students perform on assessments, the materials include practice for all students and individualized practice at the masters, meets, and approaches levels. The masters-level students have suggested acceleration practice. In the grade 1 Money scope, practice for meets-level students is 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 1 Personal Financial Literacy scope, the materials include instructional and language supports to guide the teacher's response to students' performance on the Exit Ticket and throughout the Explore. For example, "Consider printing the Picture Vocabulary slides for the words income, goods, and services and hanging them at the front of the room for students to reference throughout the lesson." Materials suggest the teacher "refer to the Scaffolded Instruction Guide" found in the "Home" section to provide 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 grade 1, Add and Subtract within 20 scopes, one suggestion states, "If students need additional support with writing their number sentences, guiding questions such as the following: What action is happening in your model? What symbol represents that action? How many total candies are there? What symbol represents a total? What symbol

could represent the unknown? As an extension, challenge students to write three addition and three subtraction problems within 20 for a partner to solve." The Heat Map directions guide the teacher to provide time "for discussion as students analyze the results of their assessment."

- Teachers use the Scaffolded Instruction Guide to plan for the next steps. A chart for teachers provides a guide broken into four percentile ranges to assist teachers in the next steps. For example, if a grade 1 student scores in the 25–50 percentile, the teacher may choose from multiple lessons, including "Small-Group Intervention, Skill Basics: Identify Two-Dimensional Shapes and Their Attributes, and Virtual Learning." Materials also provide Small-Group Intervention ideas. Included in every scope is a Small-Group Intervention section for teachers with tasks and activities in response to trends in student assessment performance. For example, in grade 1, Add and Subtract within 20 scopes, 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 grade 1 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 students track their scores on assessments. Instructions provide teachers with steps for completion. A student-friendly coding system is in place. For example, "Students use their graded assessment(s) to color-code the Heat Map. For each question answered correctly, students color the corresponding box green. For each question answered incorrectly, students color the corresponding box red." The grade 1 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 analyze their assessment results and determine what they did well and where they can improve." Teacher directions state, "Encourage students to look for patterns in their data, such as a standard that was missed more frequently or a standard they have clearly mastered, and use this information to reflect and set goals in the provided table." The student completes the Reflection by analyzing and completing the table with two columns: "I think I did well on" and "I need to work on." The materials provide student-friendly assessment trackers and reflection tools in both English and Spanish.

Supports for All Learners

3.1	Differentiation and Scaffolds	8/8
3.1a	Materials include teacher guidance for differentiated instruction, activities, and/or paired (scaffolded) lessons for students who have not yet reached proficiency on grade-level content and skills.	**3/3**
3.1b	Materials include pre-teaching or embedded supports for unfamiliar vocabulary and references in text (e.g., figurative language, idioms, academic language). (T/S)	**2/2**
3.1c	Materials include teacher guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.	**3/3**

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

Evidence includes, but is not limited to:

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

- Under the "Intervention" Tab, the materials in every scope provide differentiated instruction and activities for teachers to use with students still struggling with understanding the standards and objectives. For example, in the grade 1 scope Add and Subtract within 10, the Small Group Intervention activity instructs teachers to read the problem, discuss what is happening in the problem, model the actions using a ten frame and linking cubes, and then have the students work with a partner to solve the problem with their own ten frames and linking cubes. The teacher repeats this process several times. 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 1 scope Add and Subtract within 20, teachers pair students with a partner, have them read or listen to the problem, act out the problem using linking cubes, discuss what they know and what they need to find out, and draw a picture and the number sentence as they solve the problem within ten before working with numbers to 20. 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 1 Money 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 MAP Growth assessment data." For students who have not yet reached proficiency on grade-level content and skills, teachers pull activities in the first two percentile ranges, 0–25th percentile, previous grade-level remediation, and 25th–50th percentile, on grade level with support. The materials include specific recommendations for differentiated groups to support students who have not yet reached proficiency on grade-level content and skills. The materials include embedded reteaching components in the previously taught concepts that are explicitly reviewed and retaught for students who have not mastered the previous lesson objective or multiple objectives. For example, the Scaffolded Instruction Guide in the grade 1 Fractions scope provides activities for students who score in the 50–80% level. These options include Interactive Notebook, Interactive Practice, and Fluency Builder.

- In the section "Instructional Supports" found on every Explore Activity, teachers receive guidance for differentiated instruction and activities for students who struggle with the grade-level concept(s) for each lesson. For example, in a grade 1 scope for Addition and Subtraction Problem Solving, the Instructional Supports state, "If students need additional support using a diagram, label the sections as Part, Part, and Whole (or Total). Students could also use a strip of paper and partition it into the parts to build the whole/total. If students need additional support creating the number line or number path, provide them with a premade one with numbers labeled that they could draw on and glue onto their Student Journals. Some students may benefit from using concrete objects to represent and solve problems. Prompt them to move toward the pictorial stage, but allow them to use manipulatives (such as linking cubes, two-color counters, or bear counters) if they still need conceptual support." The materials guide teachers in using a variety of instructional modalities, such as visuals and manipulatives, to support those who have yet to reach proficiency in grade-level skills. For example, the grade 1 Fractions scope materials provide Picture Vocabulary and other visuals 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 1 scope for Addition and Subtraction Strategies, the Picture Vocabulary activity under the "Explain" tab explains, "Students build academic vocabulary and connect vocabulary to their experiences. This element is meant to be used in tandem with Explores." The materials include teaching academic vocabulary and symbols through hands-on experiences, manipulatives, and visuals. For example, Picture Vocabulary, featured as an editable Google File, presents words with visuals in both English and Spanish to use as part of the pre-teach and vocabulary review.
- The "Home" tab of each scope includes a "Content Support" section to assist teachers in pre-teaching unfamiliar vocabulary and references. For example, the Terms to Know in the "Content Support" section for the grade 1 Compare and Order Numbers to 120 scope lists necessary terms and their definitions. The materials include Content Unwrapped in the "Home" tab for each scope. For example, the grade 1 Compare and Order Numbers to 120

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 1 Compare and Order Numbers to 120 scope, the Implications for Instruction states, "Students have used comparative language to compare sets of objects and written numerals, but representing a comparison using symbols is new to them. The use of tricks such as 'The alligator mouth eats the bigger number' is not helpful in understanding what the symbols mean. Symbols can be connected to numbers and arrows on a number line."

- 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 1 scope for Addition and Subtraction Strategies, Explore 1: Basic Fact Strategies - Use 10 for Addition, the Procedure and Facilitation Points guide the teacher to have the following conversation with the students at the beginning of the Explore activity, "1. Help students access the task by asking the following guiding questions: a. Have you ever been to a store that sells lemonade or juice drinks? b. What kind of juice or lemonade do you like? 2. Read the following scenario to the class: Congratulations! You were just hired to be the new barista at STEMscopes Lemonade Shop. A barista is a person who works at a coffee shop or lemonade stand. They follow recipes to make drinks just how customers order them. Your job will be to make strawberry lemonade, but there is a catch: Each customer has their own way they like it, and they like it fast. Do you think you can complete the customer orders correctly and quickly?"

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

- The materials include a Suggested Scope Calendar, which recommends practices to enable students to showcase proficiency in grade-level content. For example, in the grade 1 Money scope, students who meet grade-level proficiency and master grade-level proficiency have differentiated activities, e.g., Math Story, Problem-Based Task, Fluency Builder, Math Today, Connection Stations, Choice Board, that also contains level specific guidance. Additionally, the Suggested Scope Calendar provides daily lessons broken into the 5E phases (engage, explore, explain, elaborate, and evaluate). Under Independent/Guided Practice," the materials instruct teachers to choose a task based on the student's level from a list of activities in the "Practice" Section provided at the end of the lesson.
- The Explore activities contain an "Instructional Supports" section that offers teacher guidance for differentiating instruction for students showing proficiency in the grade-level content. For example, in a grade 1 scope for Add and Subtract within 20, the Instructional Supports in Explore 3 guides teachers to "Challenge students to write a different number sentence to solve a problem and explain their thinking to a partner." Each scope (unit) culminates with an enrichment or extension activity, such as project-based learning, a research project, or a creative project that synthesizes content and student learning. For example, in the grade 1 Fractions Scope, a differentiated extension of the "Problem-Based Task Gizmo Geoboards"

has students "work collaboratively to apply the knowledge and skills they have learned to an open-ended, real-world challenge."

- The materials include the Scaffolded Instruction Guide in the "Home" tab for each scope. "The Scaffolded Instruction Guide is provided so teachers can plan for the next steps based on the MAP Growth assessment data." For students 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 K 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. The Procedure and Facilitation sections support the teacher in modeling, explaining, and communicating the concepts directly and explicitly. For example, in the grade 1 Addition and Subtraction Strategies scope, Explore 3: Properties of Operations, the Instructional Supports state, "Model a think-aloud strategy to demonstrate how to use one of these manipulatives to represent a scenario on the Camper's Journal. Demonstrate the process of rearranging or grouping values to compose friendly numbers that lead to composing groups of ten. Repeat this process, showing at least two combinations of numbers, and emphasize that they both result in the same sum." 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 1 Personal Financial Literacy scope, Explore 1 has guidance and prompts such as, "Help students access the task by asking the following guiding questions: a. Can you think of a time when you helped out around the house? b. What kind of work did you do? c. What is your favorite job around the house?" Each grade 1 Explore provides a Math Chat with DOK questions at various levels with sample student responses to guide the teacher in communicating the concept. The grade 1 materials provide prompts and guidance to support the modeling of concepts. For example, in the grade 1 scope for Time, the Hook- Swim-Class Times activity states, "Model how to turn the hands on the clock. After students have had a chance to explore the clocks, ask them to share observations. Prompt students as needed. For example, 'In what direction do the hands move? Which hand moves at a faster pace? Are the hands ever pointing to the same number at once?'"

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 1 Fractions 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, provided models give teachers a visual of having to turn the plates to show fractional pieces in multiple ways, along with a Fluency Builder in the Elaborate tab, Go Fish, to provide students with a means to review fractions.
- 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 1 Personal Financial Literacy scope Show What You Know- Part 2, students must explain why they chose what items Sam should buy at the zoo.
- 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 lesson of the scope are the required materials teachers use to print and reusable and consumable materials to gather per student or pair of students. The Preparation section gives teachers guidance and recommendations for effective lesson delivery, and in grade 1, the Personal Financial Literacy scope, Explore 1: Income 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 various options for students to apply the concepts learned. For example, the grade 1 Time scope offers whole group opportunities, such as the Hook- Swim Class Times activity, providing a video and DOK questions to discuss their observations as a group. The small group activity Explore 2 - Analog Clocks (Hour and Minute Hands) lesson in the same scope provides opportunities for students to work in groups of 2 or 3 to analyze the hour and minute hands on an analog clock. Individual tasks in the scope include the completion of the student Interactive Notebook and Analog Clocks Exit Ticket, allowing students to show mastery of the concept.
- The Explore activities in each scope provide various options and resources for students to practice and apply the concepts learned, including whole group, small group, individual, and partners. For example, in the grade 1 scope for Add and Subtract within 20, the Explore 3 activity begins with students exploring five stations with a group before being brought back to a whole class discussion (Math Chat) to share strategies and check for understanding. Once they have completed the Explore activity, teachers use the Small Group Instruction for students to complete the Independent and/or Guided Practice and then finish the lesson with an Exit Ticket.

Supports for All Learners

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

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

Evidence includes, but is not limited to:

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

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

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

- The materials include dedicated sections listing the English Language Proficiency Standards that are supported in each activity. Teachers use the scope's anchor charts, vocabulary cards (featuring the word and a visual), and the Language Support section (which provides sentence stems to aid in discussions) to strengthen understanding. The Word Wall cards and Picture Vocabulary slides found in every scope help the teacher build academic vocabulary as the unit progresses. In addition, the Language Support section found in each activity guides the teacher to help students build their academic vocabulary. For example, in grade 1 Addition and Subtraction Strategies scope, Explore 1: Basic Fact Strategies - Use 10 for Addition, the Language Support states, "To support students before reading the scenario, provide a visual example of a barista, and discuss their job in relation to the customer. Students may even benefit from acting out being a barista."

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 1 lists the ELPS as included standards for each scope, and the Language Supports section provides ELPS supports.
- The materials explicitly reference the ELPS and "[provides] research-based strategies and tools to support linguistically diverse learners at various proficiency levels." For example, the Teacher Toolbox provides downloadable sheets containing Proficiency Levels by Domain (English only), Sentence Stems (English and Spanish), and Working on Words (English and Spanish) to establish and strengthen academic vocabulary connections. Materials include information related to the state-approved bilingual programs.
- The Teacher Toolbox provides a Linguistic Diversity document that guides teachers to support emergent bilingual students. The document explains the materials use "integrated research-based strategies and tools to support linguistically diverse learners at various proficiency levels. In the curriculum, we have created opportunities for linguistically diverse students to engage in authentic learning through multimodal communication." The Linguistic Diversity document provides links to resources teachers may use to support their emergent bilingual

students in the classroom. The resources include a Proficiency Levels by Domain document to "provide an overview of how students are applying language across different domains, as well as methods and tools that can be applied to provide support," a Sentence Stems document for students to "practice engaging in purposeful discussion," and a Working on Words "open-ended activity [allowing] students to take agency and accountability for their growing vocabulary. This activity also encourages making relevant, personal connections to new terms in different ways, such as identifying cognates."

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

- The materials include the resource Working on Words, an "open-ended activity that allows students to take agency and accountability for their growing vocabulary. This activity also encourages making relevant, personal connections to new terms in different ways, such as identifying cognates." To further build vocabulary, the materials include picture vocabulary cards with each scope and sample anchor charts with guidance to build the anchor chart with the students. The materials include sentence stems and frames, allowing students to practice with and participate in oral and written discourse. Students use the sentence stems and frames to explain, agree, disagree, ask for clarification, and add to discussions found in the Multilingual Learners section of the Teacher Toolbox. The materials include sentence stems that are specific to each Explore in each scope. Guidance for teachers includes, "During group work, actively monitor to make sure that all students are having a turn to talk about the coins. Provide some sentence structures as needed." For example, in the grade 1 Money scope, the language support in Explore 2 includes the sentence stems, "The coin has __ edges and is ___(brown/silver). The front of the coin has ___, and the back of the coin has ___. I know this is a ____ because ____. It is worth ___ cents."
- 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 grade 1, Add and Subtract within 20 scope, Explore 2: join and Separate - Change Unknown (to 20), the Language Support states, "Help students understand each Task Card by reading the problem stem without the question three times. After the first read, ask, ‘What is this scenario about?’ Listen for and clarify any questions about the context. After the second read, ask, ‘What are the numbers we see in the scenario? What do these numbers represent?’ After the third read, ask, ‘What math questions could be answered with this information?’ Then read aloud to the class the question to solve, and allow them to begin working. Use a think-aloud strategy to model mathematically precise language of joining and separating using the beads and a chenille stem. Help students identify each problem as having an unknown change."
- 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. Additionally, the materials provide opportunities for teachers to guide students in making cross-linguistic connections through both oral and written discourse by presenting the Language Connections materials and the

picture vocabulary slides in both English and Spanish. In each Explore tab, the materials include language support. For example, in the grade 1 Money scope, Explore 2 Language Support states, "For Spanish or Portuguese-speaking students, relate the English word cent/cents with the Spanish word *el centavo/los centavos*."

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

- The Implementation Guide states, "STEMscopes math is a research- and standard-based, objective driven, data-driven, and rigorous curriculum that is well suited for a dual language immersion classroom."
- Within the Implementation Guide, the materials state, "Our approach to developing the student-facing Spanish version of our product is not a simple direct translation. Using verbiage that aligns with the Math Spanish TEKS for the state of Texas, we have a team of translators, linguistic experts, and bilingual education specialists who work to provide trans-adapted Spanish materials that give Spanish-speaking students equal access to the content in our curriculum."
- The materials further state, "All of our student-facing materials are available in both English and Spanish versions. This allows educators in the DLI programs to provide opportunities for students to use their entire linguistic repertoire and plan for explicit language-bridging opportunities within the classroom. Between 30% and 40% of vocabulary words are cognates between English and Spanish. This percentage jumps to approximately 70% of academic vocabulary encountered in math and science due to the Latin origins of the Spanish language. Specifically, the Picture Vocabulary, Interactive Vocabulary, and Anchor Chart elements help to lay the foundation for educators to look at positive language transfer not just of specific vocabulary but also morphological language patterns (such as prefixes and suffixes)."

Depth and Coherence of Key Concepts

4.1	Depth of Key Concepts	3/3
4.1a	Practice opportunities over the course of a lesson and/or unit (including instructional assessments) require students to demonstrate depth of understanding aligned to the TEKS.	**1/1**
4.1b	Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.	**2/2**

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

Evidence includes, but is not limited to:

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

- Practice opportunities in materials engage students in levels of rigor appropriate for the grade level as defined in the TEKS. For example, in the grade 1 Fractions scope under Elaborate, materials for Fluency Builder - Match a Fraction Example with a Nonexample matching game, "students turn over two cards and look to match the pictures, numbers and/or words." The materials identify concepts and solve real-world, relevant tasks and problem-solving situations that align with the TEKS, including concrete representations. For example, the grade 1 Fractions scope, Explore 2: Examples of Halves and Fourths, presents a scenario for students about sharing crackers at snack time. Students snap crackers into two and four equal parts. Guiding questions for the teacher facilitates academic conversation in the Math Chat along with an aligned Exit Ticket.
- The materials identify concepts and solve relevant real-world tasks and problem-solving situations that align with the TEKS, including concrete representations. Each scope has Life Connections in the "Elaborate" tab. For example, in the grade 1 Compare and Order Numbers to 120 scope, the materials include a lesson and guidance for students to make connections to a carnival game operator at a fair after watching a video clip. Students place carnival game scores in order from least to greatest to determine who won the game. The Suggested Scope Calendar for grade 1 suggests teachers use Daily Numeracy at the beginning of each lesson so students may practice skills based on the grade level TEKS. For example, the Counting Activity supports TEKS 1.5B: Skip count by twos, fives, and tens to determine the total number of objects.
- 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 1 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 1 Money scope, students point to different coins to show the teacher which coin is worth 25

cents, 10 cents, 5 cents, and 1 cent and use other coins to make equal amounts of money to the value of coins displayed. In the grade 1 scope Addition and Subtraction Strategies, 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 1.3D: Apply basic fact strategies to add and subtract within 20, including making ten and decomposing a number leading to a ten with checkpoints including "Physical modeling, Pictorial modeling, Problem-solving, Discussion, and Written explanation."

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

- The materials include scaffolding questions that connect concepts within and across lessons, modules, and units. For example, at each grade level, students engage in discourse around a provided question or prompt that uses routines to facilitate structured conversations. The materials for grade 1 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 the grade 1 Time scope, Explore 1 - Hour-Hand Clocks presents DOK Level 1, 2, and 3 questions with suggested student responses that progressively increase in rigor and complexity.
- The materials provide student tasks that foster critical thinking, problem-solving, real-world application, and conceptual understanding. For example, in the grade 1 money scope, students first identify coins (penny, nickel, dime, quarter) by value and then use relationships among coins to count by twos, fives, and tens to determine the value of a collection of pennies, nickels, and/or dimes. Questions and tasks in materials increase in rigor and complexity as the learning progression develops through concrete understanding, representation, and abstract thinking. For example, the grade 1 Fractions scope Explore lessons progress from partitioning shapes to a hands-on teacher-facilitated lesson, and finally, students use strategies learned to notice attributes about the division of shapes into halves and fourths. For example, in the grade 1 Addition and Subtraction Strategies scope, Explore 1: Basic Fact Strategies – Use 10 for Addition, students use concrete objects (rekenrek) to add using the make a ten strategy before representing the process pictorially by recording the problem in their student journal. Students then engage in a class discussion, sharing their strategies and what they learned.
- The materials provide a variety of assessments with questions and tasks that increase in rigor and complexity for students to show a depth of understanding aligned with the TEKS. For example, in the grade 1 scopes, "Evaluate" tab, materials include a Skills Quiz assessment. Teacher guidance for the provided 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. Each scope builds on the last, "ensuring students develop a robust and interconnected understanding of mathematics from the start. The journey through the scopes of STEMscopes Math reflects a deliberate progression from foundational numeracy and geometric concepts to more complex mathematical thinking and real-world applications."
- The materials include a vertical alignment chart of the 2019 Math TEKS for grade K through grade 3 in the Teacher Toolbox and the Content Unwrapped tab for each scope. The Content Support has a section titled Coming Attractions connecting learning in grade 1 to grade 2 and grade 3. For example, the grade 1 Addition and Subtraction scope Content Support 'Coming Attractions' section states, "Second graders recall basic facts to add and subtract within 20 with automaticity. Students also add and subtract word problems within 1,000 by using a variety of strategies. They also represent and solve addition and subtraction word problems in which unknowns may be any of the terms in the problem. In third grade, students solve with fluency one- and two-step problems involving addition and subtraction of numbers within 1,000 by using strategies based on place value, properties of operations, and the relationship

between addition and subtraction. They represent similar problems by using pictorial models, number lines, and equations." For example, the grade 1 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 second grade, students distinguish between producers and consumers and begin to get an idea about the cost required to produce items for sale."

- The materials include a Vertical Alignment for each scope in the Content Support. For example, in the grade 1 scope for Addition and Subtraction Strategies, the Content Support Background Knowledge explains, "In pre-kindergarten, students use concrete objects, create pictorial models, and share verbal problems to represent adding and subtracting within 5. In kindergarten, students model joining to represent addition and the action of separating to represent subtraction within 10. They also explain the strategies used to solve problems using spoken words, concrete objects, pictorial models, and number sentences." The materials for grades kindergarten through grade 5 include a scope and sequence, with topics introduced in a logical order. For example, the grade 1 Course Rationale in the Teacher Toolbox explains, "As students start their Grade 1 mathematical journey with the Add and Subtract within 10 scope, the focus narrows to refine students' skills in basic arithmetic operations. This scope builds directly on the introductory concepts, using objects and pictorial models to solve problems and explain strategies for addition and subtraction. It lays the groundwork for understanding operations within a larger numerical context. The Add and Subtract within 20 scope extends the arithmetic concepts to a broader range."

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 1 STEMscopes Math is carefully crafted to build on previous knowledge, ensuring a seamless transition between concepts as well as fostering a deep, comprehensive understanding of mathematics." Also included is a table listing the TEKS and connecting standards for each grade level. The table "supports the progression within and across the major mathematical topics in this grade level and emphasizes the connections among the major mathematical topics throughout the instructional year." The grade 1 Course Rationale provides a structured table showing the progression of mathematical concepts and a scope and sequence that follows a logical flow of development, with each unit building on the previous unit. 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 the Add and Subtract within 20 scope covers the mathematical concepts of Place Value and Addition and Subtraction. These two concepts build throughout grade 1 and into future grade levels.
- In grade 1, instructional time focuses on three areas, "(1) developing an understanding of place value and applying this understanding to the relationships of our numeration system; (2) extending students' understanding of addition and subtraction beyond the actions of joining and separating to include comparing and combining and using the properties of operations

and the relationships between addition and subtraction to solve problems; and (3) classifying, sorting, composing, and decomposing two-dimensional shapes and three-dimensional solids and moving from informal to more formal geometric language." A table includes the three big ideas and their connectedness throughout the course. According to the table, the grade 1 Money scope connects big ideas 1 and 3.

- 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 1 Course Rationale provides guidance for how the mathematical concepts connect across the units through patterns, big ideas, and relationships. The rationale explains, "The areas of focus highlighted in the table: Support the progression within and across the major mathematical topics in this grade level and emphasize the connections among the major mathematical topics throughout the instructional year." For example, in the grade 1 scope Add and Subtract within 10, the rationale explains, "This scope builds directly on the introductory concepts, using objects and pictorial models to solve problems and explain strategies for addition and subtraction. It lays the groundwork for understanding operations within a larger numerical context."

Materials demonstrate coherence across units by connecting the content and language learned in previous courses/grade levels and what will be learned in future courses/grade levels to the content to be learned in the current course/grade level.

- The Content Unwrapped under the Home tab includes Implications for Instruction that describe prior learning experiences with the content and provides suggestions to connect and solidify new learning in the scope. For example, the Implications for Instruction in the Content Unwrapped for the grade 1 Data Analysis scope states, "Students are comfortable with creating picture graphs, but reading or creating bar-type graphs is new to them. Multiple opportunities to convert a picture graph into a bar-type graph will allow students to make a connection between the two types of graphs." For example, in the grade 1 Addition and Subtraction Problem-Solving scope, the Content Support explains the coherence across grade level as "in kindergarten, students learn to join and separate objects to represent addition and subtraction... In first grade, students continue to build on this concept as they extend their understanding of addition and subtraction problem-solving. In second grade, students generate and solve problem situations within 1,000 when given an addition or subtraction number sentence... Third graders solve one- and two-step problems involving addition and subtraction within 1,000 with fluency by using pictorial models, number lines, and equations."
- The materials connect grade-level content with language both previously learned and to be learned in future grade levels. For example, in grade 1, students learn to use academic language that includes compose, count back, count on, decompose, difference, equal, place value, properties of operations, related facts, solve, subtract, etc. In future grade 1 scopes and future grade levels, students use these terms to explain, describe, and compare numbers. The Content Unwrapped and Visual Glossary includes concrete words on Picture Vocabulary cards (digital and print form) in the Explain tab for each scope, definitions and visuals adjust

slightly for grade-level appropriateness. The words students learn in the grade K Money scope include coin, penny, nickel, dime, and quarter. The Visual Glossary for the grade K 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 scaffold concepts and procedures for students, building on prior understanding from previous units or courses. Materials review prior knowledge with pictorial representations and conceptual illustrations, including graphic organizers to introduce new information within a concept. For example, in grade K, 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. Accessing Prior Knowledge in each scope provides an opportunity for students to activate their prior knowledge and concepts from previous and current grade levels to new concepts and procedures. For example, in the grade 1 Addition and Subtraction Strategies scope, Accessing Prior Knowledge under the Engage tab, students explore and explain addition and subtraction strategies used to solve problems.
- The materials include pictorial representations and conceptual illustrations, including graphic organizers and anchor charts, which review prior knowledge to introduce new information within a concept. For example, in the grade 1 Money scope, Anchor Chart under the Explain tab Explore 1 and 2 uses the procedure of building an anchor chart with the class to remind students of the name and value of coins. The materials provide an example anchor chart and teacher directions. Explore 3 directs the teacher to add the relationships among the coins to the anchor chart. The materials include using an Interactive Student Journal as part of the lesson procedure, providing space for students to observe coins with a magnifying glass, and recording observations about the attributes of each coin type. The Foundation Builder activity in every scope provides opportunities for students struggling to scaffold previous learning to new concepts and procedures, such as games. For example, in the grade 1 Addition and Subtraction Strategies scope, Foundation Builder under the Engage tab, students use pictorial models and number sentences to solve addition and subtraction problems.

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, the grade 1 Length scope provides a Spiraled Review - Sick Day to use as a warm-up or homework. Students create a graph, build shapes, read a word problem, complete an accompanying number sentence, and identify fractional pieces, which are taught in prior scopes. Accessing Prior Knowledge at the beginning of each scope in the Engage tab provides opportunities for students to retrieve previous skills and concepts before beginning a new scope. For example, in the grade 1 Addition and Subtraction Strategies scope, students engage in problem-solving activities involving addition and subtraction while discussing strategies and problem-solving skills. The materials provide modeling examples, tasks, and discussion prompts that activate students' prior knowledge of preceding concepts as an access point for building new mathematical understanding. For example, in grade 1 Two-Dimensional Shapes, Accessing Prior Knowledge, before students learn to classify and sort regular and irregular two-dimensional shapes based on attributes, they review two-dimensional shapes and their meaning by describing the shapes.
- 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. For example, the grade 1 Guess the Number activity covers the following skills and concepts: "1. Starting at any number, count forward and backward. 2. Read and write numerals and represent a number of objects with a written numeral. 3. Explain that the two digits of a 2-digit number represent the amounts of tens and ones. 4. Use objects, pictures, and expanded and standard forms to represent numbers. 5. Compare and order

whole numbers using concrete models, drawings, and the symbols >, <, =." 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 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 1 Addition and Subtraction Problem-Solving scope, the Spiraled Review - Rainy-Day Swimming includes four questions - two from previous scopes Add and Subtract within 20 to support TEKS 1.3B and two from Addition and Subtraction Strategies to support TEKS 1.5G and 1.5F.

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 1 Add and Subtract within 20 scope, students apply previously learned skills and concepts from grade K and the grade 1 scope Add and Subtract within 10 to practice the skills and concepts of adding and subtracting numbers up to 20. The materials include opportunities to revisit concepts in different contexts throughout the lesson. For example, in the grade 1 Compose and Decompose Numbers to 120 scope, the Content Support under the Home tab states, "Students use concrete and pictorial models to compose and decompose numbers to 120. They use manipulatives such as linking cubes to show different representations of a number. The numbers are represented as a certain number of hundreds, tens, and ones. This understanding acts as a foundation to representing numbers in expanded form." 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 1 Compare and Order Numbers to 120, students must use their previously learned skills from the Compose and Decompose Numbers to 120 scope to compare and order the numbers. In the grade 1 Compose and Decompose Numbers to 120 scope, Explore 2 asks students to compare scores from basketball games by decomposing the scores. 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 grade 1, Compare and Order Numbers to 120 scope, Explore 2, students compare the scores of basketball games to determine the winner. Procedure and Facilitation point number four states, "Instruct students to begin by looking at the scorecard at their station. They will use the linking cubes and two Place Value Mats to build each number. Encourage students to discuss and compare each number."
- 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 1, Add and Subtract within 20 scope, the materials provide the following fundamental questions, "How would you use concrete objects, pictorial models, or number sentences to represent addition and subtraction word problems involving whole numbers up to 20? What strategies can you use to solve word problems involving addition and subtraction of whole numbers up to 20? Can you explain what strategy you used to solve this problem (by using words, objects, pictorial models, or number sentences)?"
- 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 1 Three-Dimensional Solids scope, students identify and sort three-dimensional solid shapes based on attributes using formal geometric language such as edges, vertices, and faces, in addition to informal descriptions such as rolls or slides and flat or curved surfaces. Students distinguish between defining and non-defining attributes of a three-dimensional solid.

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 1 Addition and Subtraction Problem-Solving scope, students answer questions and complete the tasks by generating and solving word problems using counters, linking cubes and bear counters to represent the different tasks the circus performers are practicing, then draw or write the representation in their journal sheet. Some questions include, "What does your pictorial model show me? What action was happening in this story? What strategy did you use to solve? Is there a different way you could solve this problem?"
- In grade 1 Add and Subtract within 20 scope, students use manipulatives and models to act out addition and subtraction problems across multiple Explore activities by first using tiles and ten frames, beads, and chenille sticks, two-sided counters, graphic organizers including a part-part-whole mat, drawing the models in their journal sheets, then writing the symbols (numbers) to represent how they solved the problem using addition or subtraction. Some questions include, "What information were you given? What do you think you are trying to find out? How could you model this problem using the plate? How can you prove to me that your solution is correct?"
- In the grade 1 Data Analysis scope, students create picture graphs with real objects, linking cubes, picture cards, and student drawings. In the grade 1 Compare and Order Numbers to 120 scope, students "use place value and models, including number lines, to compare whole numbers up to 120 using comparative language such as greater than, less than, or equal to."

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

- The materials include questions that prompt students to apply conceptual understanding to new situations and contexts. For example, in grade 1, Add and Subtract within 20 scope, the Math Chat for Explore 3 asks, "How do you know when to compare two amounts instead of joining or separating them? Which of the types of unknowns was most challenging for your group—difference unknown, bigger unknown, or smaller unknown? Why? When would comparing things be useful to you in real life?"
- The materials include tasks that prompt students to apply conceptual understanding to new situations and contexts. For example, in grade 1, Add and Subtract within 20 scope, students use the Fluency Builder to apply what they have learned while playing a game where they must solve addition and subtraction problems involving a variety of representations, models, and contexts.
- The Daily Numeracy for grade 1 in the Scopes tab includes guidance for facilitating conversations with questions that help students build beyond procedures and solidify their understanding of mathematical concepts. In these student-led conversations, teachers "help students articulate their thinking by asking clarifying questions that prompt students to find the meaning in their strategy [and challenge] students to make conceptual connections rather

than procedural explanations. [The students will] defend their thinking [with encouragement] to seek different ways to prove their answers."

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

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

- The materials include daily exercises that target specific skills or concepts that build automaticity and align fluency activities with grade-level content. For example, the grade 1 materials present Daily Numeracy as a quick routine "to empower students to reason with numbers in an accurate, efficient, and flexible way." Daily Numeracy activities in grade 1 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 K through grade 2 provides tasks to build the automaticity and fluency needed to complete grade-level concepts. For example, grade K, grade 1, and grade 2 Fact Fluency: Addition and Subtraction follow 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 1 Money scope, students practice exchanging coins through an interactive game that provides immediate student feedback.

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

- The materials include opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures within the lesson. The Fluency Builder activities within Elaborate provide opportunities for students to practice the skills in each scope, allowing them to become efficient, flexible, and accurate with their mathematical procedures. For example, in the grade 1 scope Add and Subtract within 20, the Fluency Builder - Solve Addition and Subtraction Problems within 20, the students play a game with a partner where they take turns solving the problem. This game allows them to apply the most efficient strategy while being flexible and accurate mathematically.
- The materials include opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures throughout a unit. The 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, in the grade 1 scope Addition and Subtraction Strategies, Explore 3 - Properties of Operations, students use three different colored linking cubes to represent objects a friend saw each day at camp. The instructions state, "Build a concrete model of the number sentence(s) with the linking cubes. Students write the number sentence, draw a pictorial model, and answer the question in the box under the same day on their handouts."
- 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 1 Daily Numeracy activities reinforce and apply previously learned procedures. They include tasks that offer multiple entry points. Students choose different strategies to solve while promoting conceptual understanding and practicing and refining procedural skills for fluency.

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

- The materials provide strategic questions teachers use during instruction. The questions prompt students to think critically about the most efficient approach, find an alternate solution, and/or apply a procedure to all situations. For example, the grade 1 Daily Numeracy activities prompt students to solve problems using multiple appropriate strategies. The grade 1 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 grade 1 Three-Dimensional Solids scope, Problem-Based Task in the Elaborate section - 3-D Scavenger Hunt 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 materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the unit. For example, the Explore activities include Math Chats for students to evaluate the procedures, processes, and solutions used to develop efficiency, flexibility, and accuracy within the lesson. For example, in the grade 1 Addition and Subtraction Strategies scope, the Explore 3 - Properties of Operations Math Chat states, "Encourage students to notice the similarities and differences in how they add and subtract using properties of operations... [using the following questions] What strategy did you use to solve each number sentence? What happens when we add zero to another number? When you add numbers, does the order of the numbers matter? When you subtract numbers, does the order of the numbers matter? Is 6 + 7 the same as 7 + 6? Why?" 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 grade 1 Explore 1- Represent and Solve All Problem Types Math Chat in the Addition and Subtraction Problem-Solving scope, students share their thinking with the class. For example, "What problem-solving strategy did you feel was the easiest to use when solving the problems today? Why?" 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 embeds teacher support to help guide students toward developing efficiency. The guide refers teachers to the Daily Numeracy sessions to provide extra practice for students to become more efficient and fluent with the strategies learned. The Content Support in the Home section guides teachers in understanding strategies developed within the materials and the trajectory of learning from less efficient to more efficient strategies. It explains why a certain tool is appropriate and efficient for solving a task.
- The materials include Skill Basics in Explore, which has Procedure and Facilitation points for explicit modeling of efficient strategies. For example, in the grade 1 Money scope, Skill Basics

- How to Use a Hundreds Chart to Find the Value of a Collection of Coins, teachers model the use of a one hundred chart to count a collection of coins. The teacher will "[instruct] students to dump out the [cup of] coins and place them in order from highest value to lowest value. Model this using the document camera or have students gather around your manipulatives so they can see how to do this. One by one, you will start with the coin with the highest value and place it onto the corresponding number on the Hundreds Chart. As you model, students will work with their groups to follow along and copy using their Hundreds Charts and coins."

- The materials support 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 1 Fact Fluency scope, opportunities provide detailed information about the four-part process (Introducing, Reinforcing, Practicing, and Applying). Embedded content supports include Background Knowledge, Misconceptions and Obstacles, Terms to Know, and Applying Mathematical Process Standards to inform the teacher how and what is being taught in the Scope. Detailed information and examples provided in the Coming Attractions section assist teachers with vertical alignment.

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

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

- The materials include Student Expectations, Key Concepts, and Fundamental Questions in the home tab of each scope. Content Unwrapped and Content Support in the Home tab aid teachers in lesson planning with a clear understanding of the specific goals and priorities of the scope as outlined in the TEKS. These resources help teachers align instructional strategies with the required conceptual emphasis, ensuring appropriate coverage of the essential concepts and skills. For example, the grade 1 Personal Financial Literacy scope goals are, "Students define money that is earned as income. They understand that income is a method of gaining the resources to purchase goods and services. Students distinguish between goods and services by connecting their knowledge of wants and needs. They also learn about charitable giving."
- 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 1 Money scope introduces financial literacy through the identification and use of U.S. coins. This scope teaches students the value of different coins and how to count multiple coins, which connects mathematical skills such as skip counting with real-world applications, as seen in Explore 4: Count a Collection of Coins.
- The grade 1 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 under

Applying Mathematical Process Standards states, "Students sort and identify three-dimensional solids arising in everyday life, society, and workplace situations, such as building a new playground, going on a shopping trip, choosing a tent, and purchasing a tissue box." This real-world example satisfies TEKS 1.1A: Apply mathematics to problems arising in everyday life, society, and the workplace.

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

- Questions and tasks include the use of concrete models. The scopes in the materials include hands-on activities with models or manipulatives that represent mathematical concepts. For example, in grade 1, Add and Subtract within 10 scope, students solve task cards by first using centimeter cubes and Puppy Ten Frames to build a concrete model of the problem. After discussing how they solved their task card, students record a pictorial model of their ten frames, and write a corresponding number sentence, and find the solution to the problem. In the grade 1 Fractions scope, students use crackers to show their understanding of two and four equal parts hands-on opportunities.
- Questions and tasks include the use of pictorial representation (figures/drawings). The lesson materials incorporate detailed drawings and visual representations, symbolic notations, numeric expressions, and algorithms to illustrate concepts. For example, in grade 1, Add and Subtract within 20 scope, students use beads and chenille sticks to build a concrete model of the problem presented on a task card. After discussing how they solved their task card problem, students record a pictorial model of their concrete model and write a number sentence and find the solution to the problem.
- Questions and tasks include the use of abstract representations. The questions and tasks in the materials follow a pathway that clearly outlines how the conceptual understanding of key concepts relates to the procedural to create a thorough line of mastery to abstract representation. Lesson materials incorporate detailed drawings and visual representations, symbolic notations, numeric expressions, and algorithms to illustrate concepts. The materials provided engage students with multiple representations and anchor points for the teacher to reference when addressing student misconceptions. For example, in the grade 1 Two-Dimensional Shapes scope, the teacher begins the task by facilitating a discussion and assessing prior knowledge to describe the attributes of 2D figures using pictorial representations of 2D shapes.

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 1, "students build on the introductory concepts, using objects and pictorial models to solve problems and explain strategies for addition and subtraction, which lays the groundwork for understanding operations within a larger numerical context."

- The lesson materials provide students with multiple practice opportunities consisting of 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 1 Compare and Order Numbers to 120 scope, students use virtual manipulatives, number lines, and linking cubes to explore and present their solutions to determine who won the basketball game by comparing the two scores.
- 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 1 Time scope, the Skill Basics - Read, Say, and Write Time on Digital and Analog Clocks provide students with multiple opportunities to read, say, and write times. 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 1 Personal Financial Literacy scope, the teacher's directions state, "Call on a student to identify what it means to earn an income. If the student is able, they could write the definition in their own words. You might also want to add a picture of money being given over. Ask [questions] during the discussion... Add the words Goods and Services to a T-chart. Ask students to come up with an example of each one that will help them to remember what each one is easily. Ask [questions] during the discussion."
- The materials provide opportunities for students to develop their academic mathematical language using manipulatives that provide opportunities for students to read and listen to unfamiliar words in context and then apply those words in their speaking and writing. For example, in the grade 1 Money scope, Explore 1 asks students to help Ryder sort and identify coins before he can count to see if he has enough money to buy a baseball mitt. Students sort real coins, plastic coins, and images of coins on a sorting mat. Procedure and Facilitation

point number seven states, "While students are filling out the Student Journal, walk around the room and bring out the vocabulary you want the students to be using by referring to the sorting mat. Use the following guiding questions... DOK-2 How is a quarter different from the rest of the coins?...DOK-2 What are the attributes of the quarter/nickel/dime/penny?... DOK-2 How can you tell the difference between the nickels and quarters?"

- 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 grade 1 Three-Dimensional Solids scope, the Explain tab provides an Interactive Notebook with a word bank for students to reference when completing a graphic organizer to identify 3-dimensional shapes. In the same grade 1 scope, Explore 2 suggests using real-world examples of 3D shapes, such as cubes or a basket, and Print Files to assist students in identifying and describing the attributes of 3D shapes and then adding to their Interactive Notebook or classroom Anchor Chart.

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 1 Launch scope, the materials provide the following engaging games to practice vocabulary and make connections among important words and concepts: Bingo, Fish Race, Heads Down, Words Up, Pop!, Roll-a-Word, and Splat!, Sticky Situation, Trashketball, Vocabulary Dominoes, and What Am I? The materials guide the teacher with support for scaffolding language. For example, in the grade 1 Compare and Order Numbers to 120 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 and corresponding comparison symbols for greater than with less than... Students may see equal as an action, such as add or subtract. The equal sign is a relationship that means ‘is the same as' or ‘is the same value as.’"
- 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 1 Personal Financial Literacy scope, students create a flipbook of vocabulary words in their notebooks and then draw or write an example of each.
- Math Chats and DOK-level questions provide opportunities for students to develop academic vocabulary using manipulatives or visuals, allowing students to share strategies and make connections as they process learned standards. Teacher and student made Anchor Charts under Explain, which contain vocabulary, drawings, and definitions for student and teacher reference, and support students' listening, reading, speaking, and writing with the new academic vocabulary. In the grade 1 Language Connections under Explain, students apply their linguistic and cultural background knowledge to make connections with new skills, vocabulary, and concepts that align with their proficiency levels (Beginner, Intermediate, Advanced).

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

- The materials provide a set of discussion questions used to facilitate discourse without limiting student responses, guiding students to apply mathematical vocabulary and develop mathematical language. For example, the materials include Daily Numeracy, where the teacher's primary role is to facilitate and encourage open dialogue. For example, the materials include Daily Numeracy, where the teacher's primary role is to facilitate and encourage open dialogue while reinforcing "precise mathematical language [and introducing] new mathematical terms for strategies that the students devise." As a facilitator of the Daily Numeracy activities, the teacher "[helps] students articulate their thinking by asking clarifying questions that prompt students to find the meaning in their strategy [and challenges] students to make conceptual connections rather than procedural explanations." Such discussions encourage students to apply mathematical vocabulary to justify their solutions for reasonableness and to find a variety of ways to prove their answers or responses.
- The materials include embedded teacher guidance on preparing for and facilitating strong student discourse grounded in quality tasks and concepts that use appropriate academic vocabulary. For example, in the Teacher Toolbox, the materials include the "Communicate Math – Discourse" tab with expectations for creating mathematical discourse. Expectations for grades Kindergarten through grade 2 in pairs, small groups, or in a whole class setting include: "Allow students to use tools or models necessary to help with their explanations. Provide sentence stems to help scaffold language. Include a variety of approaches to convey knowledge, strategies, justifications, and conclusions. Allow adequate wait time after asking a question or hearing a response...Include accurate academic math vocabulary."
- The materials include Math Chats, a forum for students to discuss collaboratively the concepts taught in the Explore lesson. This rich discussion helps students develop their number sense, mathematical vocabulary, and math thinking skills. A Math Chat is at the end of each Explore lesson online and is available in printable form. The Math Chat lists questions of various DOK levels for the teacher, along with exemplar student responses. For example, in the grade 1 Compare and Order Numbers to 120 scope, the Explore 4 - Order Numbers Math Chat states, "DOK-2 Which number did you place first on the number line at station 1? Why? [student response] We placed 7 first because it is the smallest number. It did not have a digit in the tens place... DOK-3 What strategies did you use as you plotted numbers on an open number line? [student response] I checked the numbers at the beginning and at the end of the number line to know where to put the third number in the right place. I knew which number was less and which number was more. I made sure to put the third number in between the two numbers in the right place on the open number line."

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 1 Money scope in the Evaluate section, students must "(A) Apply mathematics to problems arising in everyday life, society, and the workplace. (D) Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language, as appropriate. (E) Create and use representations to organize, record, and communicate mathematical ideas," after identifying coins by name and value, use coins to make equal amounts of money, and count collections of coins.
- In the grade 1 Time scope, the materials integrate content and the process standards for lessons. For example, Explore 2 - Analog Clocks lists Mathematical Process Standards (C) Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems, (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. The lesson begins with a scenario using Mathematical Process Standard (C) as students manipulate the hour and minute hands on geared analog clocks to show time from a card. Students then use the Mathematical Process Standard (D) to communicate about the time on their clocks as it relates to the printed cards in small groups

of 2 or 3. 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.
- In grade 1, Compare and Order Numbers to 120 scope, Explore 1 - Generate Numbers Greater Than and Less Than integrate the process standards in each lesson in the Instructional Supports and the Language Supports. For example, Instructional Support 4: "Provide a 120 chart or counting strips to assist students with generating a number greater than or less than the given number, if needed" incorporates Mathematical Process Standard (C). The Language Support "Encourage students to participate in mathematical discourse during group work. Ask them to discuss what strategy they used to generate a number that is greater than and less than the given number" integrates Mathematical Process Standard (F).

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 1 students "connect the concept of a fair share to a problem in everyday life–sharing with friends" in the Fractions scope. In Intentional Selection of Tools and Techniques to Solve Problems (A and C), grade 1 students use tools "to deepen conceptual understanding on addition and subtraction [including] color tiles, linking cubes, or a rekenrek. Students use these tools to act out the different actions in order to solve word problems" in the Add and Subtract within 10 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 1 Compare and Order Numbers to 120 scope, Problem-Based Task under Elaborate - Toy Store Sale.
- Each scope describes how process standards connect throughout each unit. For example, the grade 1 Personal Financial Literacy scope, Content Support states, "1.1E Create and use

representations to organize, record, and communicate mathematical ideas: Students create representations of income, wants, needs, spending, saving, and charitable giving using pictures and drawings to clearly communicate the personal financial literacy situations."

- The grade 1 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 1 Content Support in the Home section provides each Mathematical Process Standard along with a description of its use in the course: "1.1A Apply mathematics to problems arising in everyday life, society, and the workplace: Students tell time to the hour and half hour in everyday life, society, and workplace situations, such as preparing clocks for a swim meet, helping prepare time cards for a fossil exhibit, and setting the time on a digital clock after a power outage."

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 1 Scope and Sequence in the Teacher Toolbox under Essentials and Curriculum Design. For example, the TEKS covered in Explore 2 of the Money Scope is 1.4A Identify U.S. coins, including pennies, nickels, dimes, and quarters, by value and describe the relationships among them and 1.4B Write a number with the cent symbol to describe the value of a coin. The Math Process Standards included are 1.1ADE.
- The materials include strategic questions for teachers to use during instruction. For example, in grade 1 Explore 3 - Collect Data and Create Bar-Type Graphs in the Data Analysis scope, the materials include the following teacher guidance and questions, "Compare two groups' bar graphs. What needs to be labeled on the bar graph?... Think about what you learned about picture graphs in the last Explore. Explain the similarities and differences between bar graphs and picture graphs?... When would you need to create your own questions to survey others in real life?" This Math Chat incorporates Mathematical Process Standards B, C, D, 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 1 in the Fractions scope as "Nonexamples are presented and analyzed, and justifications are given as to their incorrectness. Example: In Explore 2, students are asked to help prepare snacks for the kids at the daycare down the street. They have to snap a cracker into two or four fair shares and discard the pieces that are not equal shares. Students must justify their reasoning behind keeping or discarding each piece of cracker."

Productive Struggle

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

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

Evidence includes, but is not limited to:

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

- The materials include routine practice opportunities, daily assessments, and open-ended questions that allow students to explore different pathways to a solution. The materials encourage students to explain their reasoning for their strategy and consider alternative approaches to make sense of math and make connections. Additionally, the materials include open-ended questions: "How can you make sense of this problem? How might you look at the situation another way? How can you draw on your problem-solving strategies? How can you look at this problem from a fresh perspective?"
- The materials guide teachers to foster classroom environments that support students in developing a mathematician's mindset. One habit of mathematicians is persevering through challenging tasks, which encourages a growth mindset. The materials in the grade 1 Launch into Grade 1 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 1 Explore 4 - Part-Part-Whole–Whole or Part Unknown (to 20) in the Add and Subtract within 20 scope, the Exit Ticket consists of a word problem about cupcakes. The problem provides a part and a whole. Students must determine the missing part, complete a part-part-whole diagram, and write the corresponding number sentence.
- 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 1 Data Analysis scope, the Explore 2 - Collect Data and Create Picture Graphs activity has students complete a classroom survey based on a possible school event, use tally marks to keep count, create a picture graph with the results, and answer analysis questions. In grade 1 Life Connections under Elaborate for the Data Analysis scope, students view a video related to bakers and the different ways bakers use charts and graphs in their stores. Students then create their own baked goods from clay, add labels, collect data using a T-chart, and put the data into a bar graph. "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 1 Daily Numeracy scope, the Guess the Number activity, students have a number range and must guess the number by asking yes and no questions such as, "Is the number greater/less than ____? Is the number between ____ and ____?" to find the number. Students agree or disagree with their peers and justify their thinking. This shared discussion allows students to understand the similarities and differences in the problem-solving strategies of their peers.
- The materials include Problem-Based Tasks under Elaborate that require students to work collaboratively to solve a problem and discuss how different groups tackled the challenge in various ways. For example, in grade 1 Compose and Decompose Numbers to 120 scope, students draw how they would organize the equipment in groups of tens and ones. Students then discuss how they organized the equipment and explain their methods to their peers in other groups.
- The materials include lessons and tasks that require students to explain or justify that there are multiple ways to solve a problem. For example, in the grade 1 Length scope, Explore 3 - Measure the Same Thing with Different Units, the Math Chat presents DOK-level questions such as, "Why is it important to make sure your units are lined up end to end with no gaps or overlaps?... What do you notice about the larger units of measurement (quarters, linking cubes, square inch times, and large paper clips)?... If we needed to measure the length of the playground, would it be better to use paper clips or a tracing of your body? Explain." The questions prompt students to explain their answers, justify their responses, and use the manipulatives as evidence.

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

- The materials include opportunities for students to make sense of mathematics through doing. Students engage in hands-on activities to develop their understanding of the lesson's key concepts. For example, in the grade 1 Explore 2 - Basic Fact Strategies–Use 10 for

Subtraction in the Addition and Subtraction Strategies scope, students solve task cards with a partner using linking cubes to demonstrate the problem with ten frames. They discuss what they notice about the double ten frames and answer each time Kate makes a guess. Students write or record the activities on their handouts and then 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 on paper. For example, in the grade 1 Addition and Subtraction Strategies scope, students use a handout with a picture of different colored bunnies to solve problems. Students must solve the problem, draw a picture to represent the problem and resolve it using a different strategy. Students then complete sentences using academic vocabulary with a provided word bank. Additionally, students record how they feel about the concepts taught within the scope. In the grade 1 Length scope, Explore 3 - Measure the Same Thing with Different Units, students predict the length of an earthworm using various units and then measure the earthworm with those units. Using the Student Journal, students complete the provided table for their measurements. They then craft complete sentences using mathematical terms to compare the units they used for measuring the length of the earthworm and explain which unit of measure they used more or less.
- 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 1 Math Chat for Explore 2 - Represent Numbers in Different Ways, Compose and Decompose Numbers to 120 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 "How are standard form and expanded form related? How were your representations for erasers and linking cubes different from the other supplies? In what situations at home would you need to count items up to 120? Would the strategies you learned today help?"

Productive Struggle

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

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

Evidence includes, but is not limited to:

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

- The Math Chats in each Explore include specific questions that prompt explanations, arguments, and justifications. Students answer questions with explanations, engage in discussions with their peers to agree or disagree and justify their responses verbally and with representations or manipulatives if needed. For example, the grade 1 Explore 1 Math Chat in the Compare and Order Numbers to 120 scope asks, "What strategy did you use to build a number that was less than/greater than the given number?... How do you know if a number is greater than or less than? If I grab 70 linking cubes and say, "70 is less than 84," do you agree or disagree? Why?"
- The Math Story found in the Elaborate section supports teachers in guiding students to share and reflect on their mathematical approaches through explanations, arguments, and justifications. For example, the grade 1 Addition and Subtraction problem-solving scope presents students with the story Another Garage Sale on Lake Street. In the story, they count the total of different items by adding and subtracting to find the answers. Students discuss solutions, work with a partner to solve the problems in the story, and then share the solutions with the class and justify their work.
- The materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations. The procedure and Facilitation section in Explore includes clear, well-constructed instructions, questions, and prompts to facilitate student sharing and reflecting on their problem-solving approaches. For example, in Explore 2 - Generate Problems in the grade 1 Addition and Subtraction Problem-Solving scope, the materials incorporate opportunities for students to explain how they write their story problem and solve it by drawing a picture or model (a number line or a diagram) 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 1 materials provide Math Chats with scripted multi-leveled questions with exemplary answers. In the grade 1 Fractions scope, Language Supports in Explore 2 - Examples of Halves and Fourths provide teachers with sentence stems "to support students in sharing their ideas with the group during the Explore," including "I think these are halves because _____. I don't think these are halves because _____."
- The materials provide explanatory feedback for teachers to respond to student responses. For example, in the grade 1 Addition and Subtraction Strategies 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 provides the following guidance for intervention: "If the concern is applying addition and subtraction strategies, take the following steps: Have the student use manipulatives to solve problems. Have the student use a number line or number path that can be written on to show the distance between numbers. Use the counting-on or counting-back strategy." The materials include Instructional Supports for teacher feedback with each Explore. For example, two of the Instructional Supports found in Explore 1 of grade 1 Compare and Order Numbers to 120 scope states, "Students can partner up with another student in their group, and each student can use the linking cubes to create their own numbers up to 120. Student partners can then challenge each other to generate a number that is greater than or less than the partner's number."
- 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 1 Time scope, the Content Support section Misconceptions and Obstacles lists the following misconception: "Students may confuse the hour and minute hands on an analog clock... students may struggle with representing a given time on a clock." Additionally, later in the grade 1 Compare and Order Numbers to 120 Scope, the Misconceptions and Obstacles lists anticipated misconceptions, including "Students may confuse the terms and corresponding comparison symbols for greater than with less than. Students may need to be reminded that in math, we read and make comparisons from left to right, just as we do when reading text... Students may see equal as an action, such as add or subtract."