Accelerate Learning Inc.

Supplemental Spanish Mathematics, 6

STEMscopes Texas Math Pulse–Grade 6 Spanish

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Supplemental	**9798330804894**	**Digital**	**Static**

Rating Overview

TEKS SCORE	TEKS BREAKOUTS ATTEMPTED	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	211	17	Flags Not in Report	Flags in Report	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	20 out of 20	100%
2. Progress Monitoring	20 out of 24	83%
3. Supports for All Learners	33 out of 35	94%
4. Depth and Coherence of Key Concepts	16 out of 16	100%
5. Balance of Conceptual and Procedural Understanding	38 out of 38	100%
6. Productive Struggle	21 out of 21	100%

Breakdown by Suitability Noncompliance and Excellence Categories

SUITABILITY NONCOMPLIANCE FLAGS BY CATEGORY	IMRA REVIEWERS	PUBLIC	Flags NOT Addressed by November Vote
1. Prohibition on Common Core	0	0	0
2. Alignment with Public Education's Constitutional Goal	0	0	0
3. Parental Rights and Responsibilities	0	0	0
4. Prohibition on Forced Political Activity	0	0	0
5. Protecting Children's Innocence	0	0	0
6. Promoting Sexual Risk Avoidance	0	0	0
7. Compliance with the Children's Internet Protection Act (CIPA)	0	0	0

SUITABILITY EXCELLENCE FLAGS BY CATEGORY	IMRA REVIEWERS
Category 2: Alignment with Public Education's Constitutional Goal	2
Category 6: Promoting Sexual Risk Avoidance	0

IMRA Quality Report

1. Intentional Instructional Design

Materials support educators in effective implementation through intentional course and lesson-level design.

1.1 Course-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.1a	All criteria for guidance are met.	4/4
1.1b	All criteria for guidance are met.	3/3
1.1c	All criteria for guidance are met.	2/2
1.1d	All criteria for guidance met.	2/2
1.1e	All criteria for guidance met.	2/2
—	**TOTAL**	13/13

1.1a – Materials include an alignment guide outlining the TEKS, ELPS, and concepts covered, with a rationale for learning paths across grade levels (vertical alignment) and within the same grade level (horizontal alignment) as designed in the materials.

Materials follow a consistent structure across all content scopes to support instructional planning. Each scope guides teachers in delivering conceptually grounded instruction by aligning with the Texas Essential Knowledge and Skills (TEKS) and including focus and connecting standards, key concepts, and fundamental questions. This organization is part of a broader scope and sequence that outlines the progression of units and lessons across the year. The repeated structure across units promotes coherence and supports horizontal alignment within the grade level.

The "Course Rationale" includes an alignment guide outlining the TEKS, English Language Proficiency Standards (ELPS), and concepts covered with a rationale for learning paths across grade levels. This document supports the progression within and across the major mathematical concepts and emphasizes connections among key mathematical concepts covered throughout the instructional year.

"Unit/Module Overview: Content Support" includes student background knowledge required for the development of mathematical concepts and ideas. This supports teachers in understanding how skills build on prior learning experiences and outlines mathematical development across earlier grade levels leading up to grade 6. Progression supports vertical alignment by showing how conceptual understanding is intentionally developed from early numeracy into multi-digit place value, helping educators plan with awareness of students' prior knowledge.

1.1b – Materials include an implementation guide with usage recommendations and strategies for effective educator use, such as just-in-time supports, advanced learning, or as a course.

An *Implementation Guide* provides educator recommendations in various instructional formats, such as intervention and acceleration activities. Suggestions include graphic organizers and small-group intervention activities designed to reteach and reassess skills and concepts. The Elaborate tab offers extension activities, including high-interest, real-world texts that provide students with the opportunity to apply their learning.

The "Suggested Scope Calendar" supports instructional planning across multiple learning contexts. The calendar offers pacing guidance with time allocations for each lesson. Teachers can use this resource to prioritize essential content, adapt instruction to meet student needs, and integrate intervention or enrichment. These supports promote flexible implementation while preserving instructional coherence.

The materials direct educators to prioritize essential components within each lesson, embed just-in-time supports using resources such as the "Foundation Builder," and extend learning through acceleration strategies. Also, the materials include recommendations for adapting content to whole-group instruction, small-group intervention, or one-on-one learning formats. These features demonstrate an intentional design to support differentiated use of the materials across varied instructional settings.

1.1c – Materials include a TEKS correlation guide with recommended skill entry points based on diagnostic assessment results.

The materials include a "Correlation Guide" with recommended skill entry points based on diagnostic assessment results. A teacher can assign pre-assessment benchmarks, mid-assessment benchmarks, and post-assessment benchmarks, aligning each assessment with the grade-level TEKS used to gather data to guide instruction. Additionally, each scope includes a "Scaffolding Instruction Guide" based on measures of academic performance (MAP) growth, the "Heat Map," or online platforms. The table included used student percentiles to assign lessons for instruction.

The materials include benchmark and growth measurement assessments that support educators in identifying student learning gaps and instructional entry points. Teachers administer these assessments at the beginning, middle, and end of the year to evaluate prior, current, and cumulative content knowledge. The "Pre-Assessment" evaluates concepts from previous grade levels to inform decisions about reteaching and scope selection. Mid- and post-assessments provide insights into student progress and mastery. These tools allow educators to adjust the starting point for instruction based on readiness, guiding students toward targeted learning goals.

The "Suggested Scope Calendar" integrates assessment features such as "Accessing Prior Knowledge," Exit Tickets, and "Skills Quizzes" to support planning decisions. These assessments appear throughout each scope and allow educators to determine if students are ready for grade-level instruction or require

additional support. For example, prior knowledge probes help teachers identify foundational gaps, while formative checks signal readiness for the next steps. This structure allows educators to adapt pacing and instruction using student performance data, promoting aligned entry points into instruction.

1.1d – Materials include protocols with corresponding guidance for unit and lesson internalization.

The materials include protocols and guidance to support lesson internalization. Each scope or topic features an "Essentials" menu, where a "Suggested Scope Calendar" outlines the lesson internalization protocol. This calendar provides everything the teacher needs to effectively prepare for lesson delivery, including key information and hyperlinks to resources that deepen content knowledge and instructional understanding.

The "Scope and Sequence Calendar" helps educators understand key learning objectives, sequencing, and instructional strategies. This ensures that educators intentionally teach lessons that align with learning goals while building their content knowledge and confidence to deliver instruction for all students. An educator can also utilize the calendar before the start of the lesson to gather the necessary materials for lesson delivery.

Materials promote unit internalization through the "Content Support" section, which provides background knowledge, vocabulary, and common misconceptions that shape instructional planning. For example, in the same scope, the materials address how students' understanding of variables builds on proportional reasoning from earlier grades and highlight typical errors in translating verbal phrases into expressions. This resource helps educators understand the conceptual underpinnings of the unit and adjust instruction based on likely student responses.

1.1e – Materials include resources and guidance for instructional leaders to support educators with implementing the materials as designed.

Materials offer comprehensive planning tools for instructional leaders within the "Lesson Planning Resources" document. These include downloadable implementation guidance documents that detail program structure and instructional design features. The materials also provide grade-level planning guides in editable and PDF formats for a range of delivery models, including whole-group and small-group instruction. For example, leaders can reference differentiation pathways and Depth of Knowledge (DOK) alignment charts to support implementation decisions across various instructional contexts.

The *Implementation Guide* provides guidance to administrators and instructional coaches on how to use the tools provided in the materials. Such features include outlining the program structure, addressing potential challenges, explaining instructional strategies, and providing pacing recommendations to adapt the program to meet their needs. Moreover, the materials include a video to guide educators in implementing the concepts. Each lesson begins with an Engage component, which outlines the lesson

objectives, and the "Preparation" section, which offers step-by-step guidance on how to effectively implement the lesson.

An *Implementation Guide* offers sample calendars for varying instructional days, prioritization of essential activities, and recommendations for adapting instruction using prebuilt resources. It also includes tools for leading professional learning communities (PLCs), such as planning prompts and reminders tied to specific scopes, aiding leaders in consistent implementation and monitoring of instructional delivery.

1.2 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	All criteria for guidance met.	5/5
1.2b	This guidance is not applicable to the program.	N/A
1.2c	All criteria for guidance met.	2/2
—	**TOTAL**	7/7

1.2a – If designed to be static, materials include detailed lesson plans with learning objectives, teacher and student materials, lesson components with suggested timeframes, and assessment resources aligned with the TEKS and ELPS.

The materials include detailed lesson plans with learning objectives aligned to the TEKS. The materials provide detailed support in Explore 1 through clear lesson objectives, teacher instructions, and mathematical models. The scope directs teachers to facilitate activities that build conceptual understanding, such as exploring ratios using tables and double number lines. This structured approach supports consistent instructional delivery. Each scope provides the educator with materials specifying the TEKS covered, along with the corresponding "I can" statements that describe the student expectations.

The "Course Rationale" includes an alignment guide that outlines the TEKS standards and key concepts covered, along with a rationale for the learning progression across grade levels. This document supports coherent progression within and across major mathematical topics for the grade level, emphasizing the connections among these topics throughout the instructional year. Additionally, the Structured Conversations feature offers teacher-led questioning strategies, peer discussion prompts, and supports to facilitate meaningful classroom dialogue.

The "Suggested Scope Calendar" breaks down instructional content by day, offering pacing and instructional flow. Teachers receive guidance for grouping, formative checks like Exit Tickets, and instructional activities aligned with scope objectives. This structure enhances daily planning and supports effective implementation following the 5E model; the materials suggest spending 5–10 minutes in the Engage phase, 20–30 minutes for the Explore phase, 15 minutes for the Explain phase, 15 minutes for the Elaborate phase, and then 30–45 minutes to elaborate.

1.2b – If designed to be adaptive, materials include detailed lesson overviews with learning objectives, lesson components with suggested timeframes, and assessment resources aligned with the TEKS and ELPS.

This guidance is not applicable because the program is not designed to be adaptive.

1.2c – Materials contain support for families in Spanish and English for each unit, with suggestions on supporting the progress of their student(s).

The materials contain support for families in Spanish for each unit in the form of a Take-Home Letter that the teacher can print and send home. For example, for the "Fractions, Decimals and Percents" scope, the letter includes a summary of what students learned in the unit and a list of activities called Matemáticas fuera del salón de clases (Math outside the classroom), prompting students to connect their learning to real-life examples.

The Take-Home Letter provides suggestions for how families can support student progress by including visual representations of the strategies and academic vocabulary that the students will use in the unit. For example, the "Fractions, Decimal, and Percents" scope includes and explains visuals such as the 10 × 10 grids, model equivalence by using number lines, and representing fractions using strip diagrams. Furthermore, the letter includes the vocabulary terms students use throughout the unit, practice activities, and discussion suggestions to support the learning at home.

The "Content Support" section includes key background knowledge and progression insights for teachers to inform families about students' learning. It details how concepts progress from earlier grades and connect to current objectives. While not designed for families directly, the clarity of the information equips educators to translate academic content for family communication.

2. Progress Monitoring

Materials support educators in effective implementation through frequent, strategic opportunities to monitor and respond to student progress.

2.1 Instructional Assessments

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.1a	All criteria for guidance met.	2/2
2.1b	All criteria for guidance met.	2/2
2.1c	Materials do not include the capability for the teacher to enable or disable the text-to-speech and content-language support, as they are available to all students by default.	2/4
2.1d	All criteria for guidance met.	4/4
2.1e	All criteria for guidance met.	4/4
—	**TOTAL**	14/16

2.1a – Materials include the definition and intended purpose for the types of instructional assessments.

The *Implementation Guide* includes a description, type, and intended purpose of all the assessments the program provides. For instance, as an example of diagnostic assessments, the materials include the "Accessing Prior Knowledge" part of each scope or unit, defined as "a brief probing activity to gauge students' prior knowledge before engaging in the content of the scope." There is also a "Mathematical Modeling Task," which can be used as a formative or summative assessment. It is an independent or collaborative task that allows students to solve a challenging, meaningful problem in a real-world context.

The *Implementation Guide* outlines multiple opportunities for students to be assessed in a variety of ways. In addition, this document provides the definition and intended purposes of the types of instructional assessments. The materials include examples of how to utilize different formative assessments, such as Exit Ticket, Show What You Know, "Observation Checklist," and "Skills Quiz."

The program also provides teachers with access to the "Suggested Scope Calendar," where assessments are labeled as "Diagnostic (D)," "Formative (F)," or "Summative (S)," along with clear guidance on their use throughout each scope. For example, in grade 4, the "Compare Fractions" scope includes an "Accessing Prior Knowledge" task involving number lines to check for readiness, followed by formative checks such as Exit Tickets and Show What You Know. As the lesson comes to a close, a "Standards-Based Assessment" evaluates mastery of equivalent fractions and benchmark comparisons. This sequence supports targeted pacing and instructional adjustments based on student data.

2.1b – Materials include guidance to ensure consistent and accurate administration of instructional assessments.

Materials include guidance to ensure consistent administration of instructional assessments. Each scope contains a "Suggested Scope Calendar" which outlines day by day the activities that will take place in the classroom, including assessments. The calendar indicates how much time each assessment piece should take. For example, in the "Positive Rational Number Operations" scope, the assessment options include a formative Math Chat, Exit Ticket, and/or an anchor chart. It also specifies that the daily time devoted to the assessment is 10 minutes.

STEMscopes Math materials give the teacher a description of the quiz, materials needed, and clear guidance for teachers to administer the assessments efficiently. The "Skills Quiz" section describes the type of quiz being administered. It also provides additional information, such as procedure, facilitation, tips, and tricks on how to utilize the assessment and the data obtained from individual student results.

Instructional assessments provide instructions for the teacher to receive the same instruction and testing environment. For example, the "Algebraic Expressions Skills Quiz" includes both a description and an intended purpose for the assessment. There are also instructions for teacher preparation to administer the exam and provide the teacher with an option to print the digital assessment or assign the assessment online. The allotted time for the assessment (30–45 minutes) is located in the "Suggested Scope Calendar."

2.1c – Digital assessments include printable versions and accommodations, including text-to-speech, content and language supports, and calculators, that educators can enable or disable to support individual students.

Digital assessments include printable versions. For example, the *STEMscopes Texas Math Grade 6* "Growth Measurement" pre- and post-assessments include printable copies of the digital assessments. These features offer differentiated delivery methods to individual students as needed. Printable versions include accommodations such as large fonts, simplified formatting, or space for handwritten calculations.

The materials guide teachers to generate printable copies via the "Suggested Scope Calendar: Assessments," where students then graph proportional relationships on coordinate grids and record written justifications on the printed assessments, which structures conceptual development by bridging pictorial representations to symbolic reasoning.

Digital assessments include accommodations, such as text-to-speech and content and language supports, but educators cannot enable or disable these features to support individual student needs. For example, the "Skills Quiz" found under the Evaluate tab of each scope provides a speaker button and a dictionary button that allow students to have the questions read aloud to them, as well as utilize the dictionary to assist in understanding word meaning. However, the teacher cannot enable or disable those accommodations at will. This is also clearly specified in the document "Assigning Content" under the Help

tab in the main portal, which you can read under "Step 2" as follows: "Note students can enlarge text, use text-to-speech feature, highlight text, use comments & turn on dictionary mode for assistance."

2.1d – Materials include diagnostic assessments with TEKS-aligned tasks or questions, including interactive item types with varying complexity levels.

In the "Benchmarks and Growth Measurement Assessments," students solve TEKS-aligned ratio and algebra tasks that advance from identification and application to strategic reasoning and extended problem design across four DOK levels. Teachers can view pre- and post-year diagnostic reports that require students to solve concrete number comparisons, transition to pictorial models, and then articulate abstract solution strategies in writing. Educators are supported through embedded scaffolds that structure conceptual development and guide adaptive instruction based on student performance.

Materials include "Diagnostic Assessments" complete with a variety of tasks or questions and interactive item types with diverse complexity levels, such as hot-spot tasks, drag-and-drop algebra tiles, equation-editor items, multiple-choice, open-ended, griddable, drop-down, text-entry, number line, and multi-select questions. Each diagnostic assessment is carefully aligned with grade 6 TEKS and should be utilized to gather data to inform instruction. Progress monitoring tools allow for differentiated grouping and targeted scaffolds based on student performance.

Teachers access tools within the "Suggested Scope Calendar: Assessments," where students encounter daily diagnostic prompts that progress from fact recall (DOK 1) through the application (DOK 2), reasoning (DOK 3), and extended tasks (DOK 4). For example, in the "Expressions and Equations" scope, the calendar embeds hot-spot tasks, equation-editor entries, and open-response prompts with time stamps that require students to model variable relationships and explain their reasoning in writing. Educators are supported through embedded scaffolds that structure conceptual development and guide adaptive instruction based on student performance.

2.1e – Materials include a variety of formative assessments with TEKS-aligned tasks or questions, including interactive item types with varying complexity levels.

Materials include a variety of formative assessments with TEKS-aligned tasks or questions, with varying levels of complexity. For example, in the "Area and Volume" scope, formative assessments include Exit Tickets in the Explore section, where students interact with open-ended questions and calculate the area or volume of shapes using models and a problem-solving template (skills/concepts, DOK 2). In addition, a set of Show What You Know activities in the Explain section involves finding missing information (base or height) given the area or volume of a shape (strategic thinking, DOK 3). In the Elaborate section, there is a Spiraled Review that consists of multi-step word problems (extensive thinking, DOK 4). Furthermore, the conclusion of the unit consists of an "Observation Checklist" and a "Skills Quiz" with questions of varying complexity under the Evaluate section.

The "Suggested Scope Calendar: Assessments" slide within each scope contains TEKS-aligned formative tasks sequenced by day and by cognitive demand. Teachers can view and reference a progression from DOK 1 recall to DOK 3 reasoning. The platform provides hot-spot graph-feature checks, equation-editor entry tasks, and open-response prompts with time stamps that require students to model variable relationships and explain their strategies in writing.

In the "Area and Volume" scope, formative assessments include Exit Tickets in the Explore section, which consist of open-ended problems where students calculate the area or volume of shapes using models and a problem-solving template (skills/concepts, DOK 2). In addition, a set of Show What You Know activities in the Explain section involves finding missing information (base or height) given the area or volume of a shape (strategic thinking, DOK 3). In the Elaborate section, there is a Spiraled Review consisting of multi-step word problems (extensive thinking, DOK 4). To conclude the unit, there is an observation checklist and a skills quiz with questions of varying complexity in the Evaluate section of the scope.

The "Positive Rational Number Operations" scope includes interactive formative assessments where students recall mathematical processes in solving multiplication and division problems using virtual manipulatives, such as fraction tiles and Cuisenaire Rods, to analyze word problems and justify their responses. Furthermore, the "Skills Quiz" includes TEKS-aligned questions and multistep problems with multiple-choice and text-entry responses.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	Materials do not include a rationale for each correct and incorrect response.	1/3
2.2b	All criteria for guidance met.	1/1
2.2c	All criteria for guidance met.	2/2
2.2d	All criteria for guidance met.	2/2
2.2e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	6/8

2.2a – Instructional assessments include scoring information and guidance for interpreting student performance, including rationale for each correct and incorrect response.

Summative assessments include scoring information and guidance for interpreting student performance. For example, in the benchmark assessments for beginning, middle, and end of the year, found within the Assessments tab, the program automatically scores the assessments to provide the teacher with data that allows them to inform instruction. However, the materials do not include a rationale for correct and incorrect student responses.

The materials also provide a "Heat Map" for the benchmark assessments, allowing students to record their results by standard. This practice supports students in monitoring their progress. Furthermore, this integrated tool guides teachers' plans for the next steps and suggests materials based on students' "Instructional Area" scores.

Moreover, the "Scaffolded Instruction," found within the Home tab of each scope, provides guidance for the teacher to plan for the next steps based on the student's performance on the scope's assessment or the MAP test. The "Scaffolded Instruction Guide" is provided for teachers to plan their instruction based on student performance on the "Scope's Assessment" on their digital "MAP Growth" assessment data. Additionally, the "Scaffolded Instruction Guide" categorizes student performance into four percentile ranges for each standard based on the categories described.

0%–25%: Indicates a need for remediation on prior grade-level content.

25%–50%: Suggests the student needs support with current grade-level concepts.

50%–80%: Shows the student is performing at grade level.

80%–100%: Reflects the student is ready to extend beyond grade-level expectations.

For each range, the guide provides targeted instructional material recommendations aligned to the assessed standard.

2.2b – Materials provide guidance for the use of included tasks and activities to respond to student trends in performance on assessments.

The materials provide guidance on using included tasks and activities to address student performance trends on assessments. For example, in the "Rational Numbers" scope, after students have taken the "Skills Quiz," the materials refer the teacher to the "Scaffolded Instruction Guide" to differentiate instruction for each student. The "Scaffolded Instruction Guide" provides suggested activities for students who still need reinforcement in TEKS 6.2A, 6.2B, and 6.2C.

Educators utilize the "Progress Monitoring Guide: Observation Checklist" to track student mastery of key mathematical concepts during instruction through note-taking and performance reflection. This tool supports teachers in recording observed progress during small- and whole-group activities. For example, in the checklist in the "Represent and Solve Problems with Integers" scope, teachers can use the checklist to observe if students can apply integer rules correctly in context problems and identify which learners may need scaffolded support. The checklist also directs teachers to consult the "Scaffolded Instruction Guide" for differentiated follow-up based on these performance trends.

The "Scaffolded Instruction Guide" offers support for teachers in using assessment results to plan purposeful, grade-level appropriate tasks and activities. Through the digital platform, educators can view student performance trends, such as commonly missed TEKS, progress over time on specific concepts, and which students are showing growth or stagnation. The materials also include guidance on how to use this data to adjust instruction, create targeted small groups, and plan for reteaching or enrichment.

2.2c – Materials include tools for teachers to track student progress and growth, and tools for students to track their own progress and growth.

The STEMscopes materials include a dashboard where teachers may assign formative, diagnostic, and summative assessments that allow educators to compile real-time data highlighting areas of strength and weakness and monitor student progress. This enables educators to provide timely interventions and make instructional adjustments. Furthermore, STEMscopes materials allow students to monitor their student growth by consulting "Heat Maps," which include reflection sheets that allow students to take ownership of their learning, set goals, make note of their strengths, and identify learning opportunities.

The "Observation Checklist" outlines key concepts and skills within the scope and serves as both a formative assessment tool for teachers and a self-assessment tool for students. Teachers can use it to track student progress by recording anecdotal notes based on observed understanding. Students can use the checklist to reflect on their learning, identify ways to demonstrate understanding, and monitor their progress on each concept or skill.

The "Benchmarks and Growth Measurement Assessments" system includes both teacher- and student-facing tools that support growth monitoring. Teachers track student progress across multiple checkpoints using Quantile scores to measure improvement and guide instruction over time. Students also complete "Heat Map" and "Reflection" sheets in which they color-code correct and incorrect responses by standard and answer prompts such as "Which skill did you feel most confident with?" and "How can you avoid those errors in the future?" These structured tools enable students to reflect on academic progress while providing teachers with actionable growth data. Together, these components let teachers track academic growth over time while enabling students to visualize and reflect on their improvement.

2.2d – If designed to be static, materials provide prompts and guidance to support educators in conducting frequent checks for understanding at key points throughout each lesson or activity.

The materials support educators in conducting frequent checks for understanding at key points throughout each lesson or activity. For example, in the Explore section of the "Coordinate Planes" scope, the materials guide the teacher to invite the class to a Math Chat that allows students to share their observations and learning. Some of the questions included in this activity are, "How are number lines and coordinate planes similar? What is the ordered pair for the courthouse?" This activity promotes rich mathematical discourse and student reasoning while allowing teachers to facilitate reflective discussions and share observations at the end of each lesson. Then, the materials provide some sample student responses for the teacher to guide the conversation.

The educator can conduct checks for student understanding in the Explore phase of the scopes. The activities found within this component of the 5E Model introduce students to a concept through hands-on, inquiry-based activities. This section is designed to spark curiosity, get students thinking, and give the teacher early insight into student understanding. The Explore section offers teachers a range of questions at varying DOK levels to engage students and check understanding throughout the activity.

In the lesson opener, Hook, of the "Fractions, Decimals, and Percents" scope, teacher-facing directions embed real-time prompts that spark checks for understanding. Before exploration, students examine two store ads and answer "¿Qué notas? ¿Dónde puedes ver las matemáticas en esta situación?" to surface prior knowledge. After exploration, prompts such as "¿Cómo se puede determinar el porcentaje de descuento . . .?" require learners to justify percent calculations, providing the teacher with immediate evidence of conceptual grasp before the lesson advances.

2.2e – If designed to be adaptive, materials provide frequent checks for understanding at key points throughout each lesson or activity.

This guidance is not applicable because the program is not designed to be adaptive.

3. Supports for All Learners

Materials support educators in reaching all learners through design focused on engagement, representation, and action/expression for learner variability.

3.1 Differentiation and Scaffolds

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.1a	All criteria for guidance met.	1/1
3.1b	All criteria for guidance met.	4/4
3.1c	All criteria for guidance met.	2/2
3.1d	Materials do not include educator-controlled options to enable or disable text-to-speech or content and language supports for individual students. These features are available to all students by default and cannot be personalized based on student needs.	1/3
3.1e	All criteria for guidance met.	2/2
—	**TOTAL**	10/12

3.1a – Materials include explicit educator guidance for lessons or activities scaffolded for students who have not yet reached proficiency in prerequisite or grade-level concepts and skills.

Materials include explicit educator guidance for lessons or activities scaffolded for students who have not yet reached proficiency in prerequisite or grade-level concepts and skills. For example, in the "Fractions, Decimals, and Percents" scope, under the Intervention tab, students use manipulatives and models to reinforce different strategies to relate percents to fractions and decimals. Students progress through multiple representations and percent scaffolds, including hundredths grids, then number lines, followed by strip diagrams, and finally applying multiplication and division. Moreover, the materials provide the educator with step-by-step scripted guidance organized into five components to help students scaffold their learning upon previous knowledge.

The materials include explicit educator guidance in the "Scaffolded Instruction Guide," assigning scaffolded lessons based on student performance bands. Teachers determine students' percentile ranges using either the scope assessments or MAP Growth and then assign instructional content aligned to specific TEKS and readiness levels. These lessons include reteaching opportunities for students who have not yet reached proficiency in prerequisite or grade-level concepts and skills, such as "Small Group Intervention" and foundational tasks drawn from earlier grade bands. Students scoring in the 0–25% range are directed to previous grade-level remediation, while others receive grade-level support or enrichment. This framework ensures students have access to differentiated scaffolds while teachers implement instruction aligned to skill gaps.

Materials provide intervention lessons for teachers to provide scaffolded instruction for those who have not yet reached proficiency in prerequisite or grade-level concepts and skills in the "Instructional Supports" within the Explore lesson guides.

3.1b – Materials include explicit educator guidance for language supports, including pre-teaching and embedded supports for developing academic vocabulary and unfamiliar references in text.

The materials provide explicit educator guidance for embedded language supports by integrating real-time modeling, sentence stems, and structured discussions to reinforce academic vocabulary and unfamiliar mathematical references. Teachers guide students to use key terms like *decompose*, *rearrange*, *base*, *height*, and *area* during math chats and collaborative tasks with prompts, including "I used a _____ to model the problem." Students engage in constructing and labeling 2-D shapes using manipulatives while discussing their thinking with peers using vocabulary from a structured anchor chart. The lesson embeds support through modeled comparisons between figures, peer questioning routines, and visuals that clarify geometry terms and relationships in context.

The materials support pre-teaching or reinforcing unfamiliar vocabulary and references in the text, such as academic language or figurative expressions. The Picture Vocabulary feature, found under the Explain tab within each scope, helps introduce academic terms through clear, student-friendly definitions paired with visuals to support understanding.

Digital lesson previews provide educators with pre-teaching support. In addition, the "Content Support" page allows educators to view how new terms will be introduced in the scope. For example, the "Ratios, Rates, and Unit Rates" scope includes visuals and charts showing the problem-solving process and academic language used in student activities throughout the lessons. This practice supports the educator with guidance in pre-teaching unfamiliar terms and strategies to embed additional support within the lessons to prepare for the lesson.

3.1c – Materials include explicit educator guidance for enrichment and extension activities for students who have demonstrated proficiency in grade-level and above grade-level content and skills.

Materials include teacher guidance for enrichment activities for students who have demonstrated proficiency in grade-level content and skills. The "Scaffolded Instruction Guide" provides tailored lesson suggestions based on "MAP Growth" percentile ranges. For students in the 81–100% range, it recommends enrichment and extension activities that go beyond grade-level expectations. The Acceleration component of the scope includes structured activities such as project-based tasks, real-world math applications, and opportunities for advanced problem-solving, all designed to challenge proficient students.

Extension activities with explicit educator guidance are included in the materials for students who have demonstrated proficiency in grade-level and above-grade-level content and skills. For example, in every scope, within the Elaborate component, an interactive game can be assigned to those students who have mastered the skill. The game requires students to apply what they have learned to earn points or win. For instance, in the "Rational Numbers" scope, the interactive game Marine Lab 2020 requires students to determine which equation would yield a given positive or negative number.

The materials include enrichment activities for students who demonstrate proficiency in and above grade-level content. Each scope includes a "Scaffolded Instruction Guide" with activities designed for students demonstrating concept proficiency. For example, the "Represent and Interpret Data" scope features Picture Vocabulary, Interactive Vocabulary, and Would You Rather activities targeted at students performing in the 50th to 100th percentile range.

3.1d – Digital materials include accommodations, including text-to-speech, content and language supports, and calculators that educators can enable or disable to support individual students.

The materials provide teachers with the ability to enable or disable calculator access when assigning the "Skills Quiz." Through the "Assign to Students" feature, educators can select from multiple calculator types—four-function, scientific, or graphing. This setup allows teachers to adjust digital accommodations based on the learning needs of individual students or groups.

Digital materials provide accommodations, such as text-to-speech and content and language supports, but educators cannot enable or disable them to support individual students. For example, the "Skills Quiz" within the Evaluate component of each scope provides a speaker button with the option to have the questions read aloud to the student and a dictionary button for student use. However, the teacher cannot disable those buttons at will.

By default, all students have access to enlarged text, the text-to-speech feature, text highlighting, commenting tools, and dictionary mode for assistance. The only feature that the teacher can enable and disable is the calculator.

3.1e – Materials include educator guidance on offering options and supports for students to demonstrate understanding of mathematical concepts in various ways, such as perform, express, and represent.

Materials include educator guidance on offering options for students to demonstrate understanding of mathematical concepts in various ways—such as performing, expressing, and representing their thinking. For example, in the "Fractions, Decimals and Percents" scope, students demonstrate their knowledge of fractions, decimals, and percents by using a hundredths grid in Explore 1. In Explore 2, they represent their understanding with models and symbols and explain their thinking with words. Furthermore, in

Explore 3, students verbalize their ideas through a Math Chat and create an anchor chart to demonstrate their understanding.

Students demonstrate their understanding of mathematical concepts in multiple ways. The Explain component of the scope offers structured tasks such as Picture Vocabulary, Model & Discuss, and Guided Practice, which help students represent mathematical concepts through visuals, manipulatives, and verbal reasoning. In addition, Elaborate materials include activities such as Problem-Based Tasks, Math Today, and Create Your Own, allowing students to express and perform their understanding through real-world applications, written explanations, and hands-on models. These features support diverse learning styles and give students multiple ways to demonstrate their mathematical thinking.

The *Implementation Guide* provides the educator with guidance on offering options for students to demonstrate understanding of mathematical concepts. Materials include a description of different opportunities that students engage in for meaningful mathematical practice to demonstrate understanding, such as Math Story and the Take-Home Letter: Tic-Tac-Toe choice board.

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	All criteria for guidance are met.	5/5
3.2b	All criteria for guidance are met.	2/2
3.2c	All criteria for guidance are met.	3/3
3.2d	All criteria for guidance are met.	2/2
3.2e	All criteria for guidance are met.	2/2
—	**TOTAL**	14/14

3.2a – Materials include explicit (direct) prompts and guidance for educators to build knowledge by activating prior knowledge, anchoring big ideas, and highlighting and connecting key patterns, features, and relationships through multiple means of representation.

Lessons include clear prompts and guidance to help teachers build student understanding. Each scope begins by activating prior knowledge through hands-on tasks or real-life examples. The "Scope Overview" component of the lesson highlights big ideas that guide instruction, while activities throughout the scope focus on identifying patterns, recognizing key features in models, and making connections between different representations—such as visuals, equations, and number lines. This structure supports deep understanding and flexible problem-solving.

Materials include explicit prompts and guidance for educators to build knowledge by activating prior knowledge, not only related to the content but across subjects as well. For example, in the "Coordinate Planes" scope within Explore 1, the teacher asks questions such as "Why do cities plan their layouts around important city buildings?" After students have discussed these questions, the materials provide other questions that activate prior knowledge related to the content, such as "What experience do you have working with horizontal and vertical number lines?"

The lessons provide teachers with specific and structured opportunities to help students make meaningful connections between mathematical concepts, fostering deeper understanding. Each Explore lesson concludes with a Math Chat discussion that allows students to share their observations and learning. Additionally, the educator highlights and connects key patterns, features, and relationships through multiple means of representation during this activity. Following this framework at the close of the lesson helps students develop a deeper understanding of mathematical concepts and ideas.

3.2b – If designed to be static, materials include educator guidance for effective lesson delivery and facilitation using various instructional approaches.

The STEMscopes materials include educator guidance for effective lesson delivery and facilitation. Each scope begins with a Hook lesson that connects to real-world problems and scenarios to learn about

mathematical concepts. The Explore lesson guide includes various instructional approaches to deliver effective and engaging instruction to meet the diverse needs of all learners. For example, the lesson guide prompts learning in a variety of ways for students, including opportunities for direct instruction in Math Chats and Structured Conversations.

Lesson delivery support is embedded throughout the curriculum's activities, with each lesson component guiding teachers. Every scope begins with a "Lesson Overview," which outlines key learning objectives, pacing suggestions, grouping strategies, and required materials. The Explore and Explain components include detailed "Procedure and Facilitation Points" to guide questioning, model think-alouds, and address common student misconceptions. These supports help educators transition between whole-group, small-group, and independent instruction, enabling them to tailor delivery to meet diverse student needs.

The "Suggested Scope Calendar" within the "Integer Operations" scope provides teacher-facing pacing and instructional delivery guidance across 14 days of instruction. Each lesson plan structures direct instruction, guided practice, Math Chat, and independent activities using manipulatives, including two-color counters, number lines, and interactive notebooks. Educators receive support for transitioning between whole group and small group facilitation, with anchor charts and Structured Conversations embedded throughout the plan. Students engage in diverse learning through hands-on tools, journals, reflection routines, and assessments, such as Exit Tickets and Decide and Defend, to demonstrate understanding through written explanations.

3.2c – Materials include multi-tiered intervention methods for various types of practice and structures and educator guidance to support effective implementation.

Materials include multi-tiered intervention methods for various types of practice and educator guidance to support effective implementation. For example, in the Intervention component of the "Positive Rational Number Operations" scope, the lesson begins with an independent pre-assessment, "Quick Check," to gain insight into where students stand on their understanding of the concept. Then, during the "Review" step, the materials provide guided practice where students follow a step-by-step representation of multiplication of fractions. Students complete this part independently or collaboratively in small groups. In the end, students independently complete the Checkup to demonstrate mastery.

The materials include multi-tiered intervention methods throughout the curriculum. These supports are evident in components such as the "Scaffolded Instruction Guide," "Suggested Scope Calendar," and lesson-specific "Facilitation Points." The materials offer structured opportunities for whole-group instruction during lesson introductions, small-group work in the Explore and Elaborate components, collaborative practice through partner or group tasks, and independent learning in the Interactive Practice and Evaluate components throughout each scope.

Intervention opportunities are offered throughout each scope for various types of practice and structures. In addition to guided instruction and whole group and collaborative experiences in Explore

lessons, each scope also includes Intervention lessons with guidance and resources for small-group collaborative practice and an individual Checkup to monitor intervention practices.

3.2d – Materials include enrichment and extension methods that support various forms of engagement, and guidance to support educators in effective implementation.

Materials include enrichment and extension methods that support various forms of engagement. For example, in the Elaborate portion of the "Algebraic Expressions" scope, students play two interactive games to reinforce their learning. Then, in the Acceleration section, students must discuss and decide on a type of stamp they would prefer to collect, justifying their choice and writing an equation to match.

Enrichment opportunities can be found in the Acceleration components of every scope. For example, in the "Future Planning" scope, students analyze career options using real-world salary data and apply proportional reasoning to justify long-term earnings in the Would You Rather – Comparing Careers activity. Teachers are directed to activate students' prior knowledge from previous activities within the scope to lead into paired student discussions on future careers and incomes based on personal interests that promote mathematical creativity and fact-based decision-making. The materials include teacher facilitation points and discussion structures, supporting the implementation of extension tasks.

Materials include both enrichment and extension methods to promote varied forms of student engagement. Enrichment tasks—such as Acceleration" Problem-Based Tasks, Math Today, and Create Your Own—encourage students to explore concepts, using creative, collaborative, and real-world applications. These activities support hands-on, visual, and inquiry-based learning. To support educators, the program provides clear guidance with "Facilitation Points" and "Scaffolded Instruction Guides."

3.2e – Materials include prompts and guidance to support educators in providing timely feedback during lesson delivery.

The materials include prompts and guidance to help educators provide timely feedback during lesson delivery. For example, each Explore lesson guide embeds guiding questions that teachers ask to assess student understanding and address misconceptions in real-time.

Both prompts and guidance that support educators in providing timely feedback during lesson delivery exist in every scope of the curriculum. Throughout the scopes, facilitation questions are embedded in lesson components to help teachers assess student understanding and respond in the moment. These prompts encourage students to explain their thinking, justify their reasoning, and engage in meaningful mathematical conversations, allowing educators to deliver targeted feedback to clarify misconceptions and strengthen student learning.

Materials guide educators in providing timely feedback during lesson delivery. For example, in the "Banking and Credit" scope, the materials prompt the teacher to monitor student progress and check for understanding using guiding questions such as "What are some of the fees associated with having a

checking account? What is an overdraft or insufficient funds fee? How would you describe a daily minimum balance requirement?" This approach ensures that educators conduct frequent checks for understanding.

3.3 Support for Emergent Bilingual Students

An emergent bilingual student is a student who is in the process of acquiring English and has another language as the primary language. The term emergent bilingual student replaced the term English learner in the Texas Education Code 29, Subchapter B after the September 1, 2021 update. Some instructional materials still use English language learner or English learner and these terms have been retained in direct quotations and titles.

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.3a	This guidance is not applicable to the program.	N/A
3.3b	This guidance is not applicable to the program.	N/A
3.3c	All criteria for guidance are met.	1/1
3.3d	All criteria for guidance are met.	8/8
3.3e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	9/9

3.3a – If designed to be static, materials include educator guidance on providing and incorporating linguistic accommodations for all 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.

This guidance is not applicable because the adaptive Spanish program does not require guidance on providing and incorporating linguistic accommodations.

3.3b – If designed to be adaptive, materials include embedded linguistic accommodations for all 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.

This guidance is not applicable because the adaptive Spanish program does not require guidance on providing and incorporating linguistic accommodations.

3.3c – Materials include implementation guidance to support educators in effectively using the materials in state-approved bilingual/ESL programs.

The materials provide online resources to support educators in supporting emergent bilingual students. For example, the "Teacher Toolbox" offers a "Linguistic Diversity" component, which provides educators with an overview of the resources and strategies embedded within the STEMscopes materials to support linguistically diverse students. In addition, the resource includes the "Proficiency Levels by Domain" document, which provides educators insight into how to support emergent bilingual students by delivering scaffolded instruction. For example, educator guidance for the "Triangle Properties" scope

suggests providing students with "illustrations or examples of words and phrases used in this Explore such as triangle sum theorem. Model correct pronunciation of each phrase, and have students repeat as needed" to support emergent bilingual learners.

STEMscopes Math support offers implementation strategies for educators of students in bilingual and ESL programs through multiple embedded resources. Each scope includes a translated Spanish version, which features student-facing materials such as Explore, Explain, Elaborate, and Evaluate activities, along with Spanish-language teacher facilitation notes. For example, in the "Rational Numbers-Explore" scope, the provided sentence stem is: "The absolute value is ____ because ____" and "El valor absoluto es ____ porque ____." This supports dual-language instruction while maintaining alignment with the TEKS.

The *Implementation Guide* outlines how Spanish-language materials are adapted to align with math Spanish TEKS, supporting educator implementation in state-approved bilingual programs. Teachers are prompted to use Picture Vocabulary and Anchor Charts to scaffold instruction and support morphological awareness in Spanish. The Picture Vocabulary provides student-friendly definitions and visuals to reinforce vocabulary, serving as a scaffold for language development. For example, in the "Triangle Properties" scope, the word *longitud* (length) is included on the front of a digital flashcard with a corresponding visual, while the back of the card contains the definition. All student-facing materials are available in Spanish, enabling educators to implement instruction consistently in dual language classrooms.

3.3d – Materials include embedded guidance to support emergent bilingual students in developing academic vocabulary, increasing comprehension, building background knowledge, and making cross-linguistic connections through oral and written discourse.

Materials include embedded guidance to support emergent bilingual students in developing academic vocabulary, increasing comprehension, and building background knowledge. For example, the materials provide a Math Chat, which includes questions for student reflection and discussion to foster comprehension. In addition, "Language Supports" offer teachers suggestions for teaching vocabulary through the use of sentence stems, supporting academic expression, vocabulary development, and the establishment of background knowledge. For example, Explore 4 of the "Measures of Data" scope guides teachers to "proporcionar una imagen para aclarar el significado términos no matemáticos en su relación con el contexto, como edificios, pisos y rascacielos."

Guidance for making cross-linguistic connections is provided within the Explore section to enhance bilingual support. For instance, the Explore 2 activity of the "Measures of Data" scope recommends that teachers of Spanish speakers emphasize how the word *area* is a cognate, as it is spelled the same in both English and Spanish. The activity also highlights similarities between English and Spanish vocabulary, such as *data* and *datos*. Lastly, the materials encourage identifying additional cognates in other home languages spoken by students in the classroom to meet the needs of diverse multilingual learners.

The curriculum supports emergent bilingual students to build academic language and support comprehension. The "Teacher Toolbox," specifically the "Multilingual Learners" section, provides sentence stems in both English and Spanish, organized by proficiency levels across listening, speaking, reading, and writing, such as "Mi respuesta es razonable porque . . ." and "My answer is reasonable because . . ." In addition, the resource includes instruction on metalinguistic transfer, helping students connect English and Spanish vocabulary and concepts. In the Explain tab, the Picture Vocabulary feature offers visuals paired with bilingual definitions to support vocabulary development. For instance, the "Algebraic Expressions" scope includes a slide for equivalent expressions with a corresponding definition, visuals, and equations of equal value to visually support learners.

3.3e – If designed for dual language immersion (DLI) programs, materials include resources that outline opportunities to address metalinguistic transfer from English to the partner language.

This guidance is not applicable because the program is not designed for dual language immersion (DLI) programs.

4. Depth and Coherence of Key Concepts

Materials are designed to meet the rigor of the standards while connecting concepts within and across grade levels/courses.

4.1 Depth of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.1a	All criteria for guidance met.	2/2
4.1b	All criteria for guidance met.	4/4
—	**TOTAL**	6/6

4.1a – Practice opportunities throughout learning pathways (including instructional assessments) require students to demonstrate depth of understanding aligned to the TEKS.

Materials include opportunities for students to build knowledge through real-world problem-solving tasks. Students have opportunities to engage in concrete and representational models to support their learning. For example, in the "Triangle Properties" scope, students represent and solve problems related to triangle properties. After exploring the properties of triangles with concrete models (straws), students use tools such as the protractor, ruler, and geoboard (also available as a virtual tool) to determine the measurement of angles, draw, and justify their conclusions about the relationship of angles in Explore 2. Teachers are supported with facilitation questions for formative assessment, as well as an Exit Ticket to help differentiate and tailor instruction to meet the individual student needs.

The program contains assessments that align with the depth of understanding required by the TEKS and provide accurate data regarding students' grade-level proficiency. This enables educators to make informed instructional decisions and tailor support to meet students' needs. The intent of the "Pre-Assessment" is to evaluate students on standards they have already learned in previous academic years, while the "Post-Assessment" evaluates grade-level standards. The "Post-Assessment" can be used as a predictor of student performance on state tests.

In the "Suggested Scope Calendar," teachers access tools for the "Functions and Patterns" scope, where students construct coordinate graphs or function tables and explain how their models satisfy given conditions. The platform provides detailed timeframes, prompts, and progress monitoring tools to analyze student explanations across multiple complexity levels. This embedded assessment guides adaptive instruction and demonstrates depth of understanding across multiple representations.

4.1b – Questions and tasks, including enrichment and extension materials, increase in rigor and complexity, leading to grade-level and above grade-level proficiency in the mathematics TEKS.

Questions and tasks increase in rigor and complexity, leading to grade-level proficiency in the mathematics TEKS. For example, in the "Fractions, Decimals, and Percents" scope, during the Engage portion of the module, students begin by discussing how two stores offer discounts—one providing a specific dollar amount off and the other offering a percentage discount. Then, during the Explore section, students use hundreds charts to understand and represent percentages with the guidance of the teacher. As students develop a deeper understanding of the concept, they begin to use more abstract strategies to calculate percentages, such as converting between decimals, fractions, and percents. Finally, in the Explain section of the scope, students demonstrate grade-level proficiency by calculating percentages within word problems.

The program includes materials, questions, and scaffolded tasks connecting concepts by asking students to apply their knowledge in progressively more complex ways. For example, in the "Area and Volume" scope, students use their understanding of decomposing figures (quadrilaterals and triangles) to find the area of two-dimensional figures. Students then collaborate to help landscapers determine the area of each customer's garden in the Explore activity. This guidance supports the teacher in delivering strategically scaffolded questions and tasks. The progressive increase in rigor and complexity creates access points for students to build upon previous math skills and deepen their understanding of key concepts.

Tasks included in the program contain questions and tasks that increase in rigor and complexity, supporting students as they work toward and above grade-level proficiency. For example, in the Measures of Data Explore 5 activity, students demonstrate their ability to interpret and summarize data presented in a variety of graphs, including dot plots, stem-and-leaf plots, histograms, and box plots. In the Baseball Task Cards activity, students communicate their understanding of data representations through written responses. These mathematical process skills prepare the student for above-grade-level proficiency.

4.2 Coherence of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.2a	All criteria for guidance met.	1/1
4.2b	All criteria for guidance met.	1/1
4.2c	All criteria for guidance met.	4/4
—	**TOTAL**	6/6

4.2a – Materials demonstrate coherence across concepts horizontally within the grade level by connecting patterns, big ideas, and relationships.

The "Grade 6 Course Rationale" supports the progression within and across the major mathematical topics at this grade level. This guide emphasizes the connections between major mathematical concepts across the instructional year, promoting a cohesive understanding of math. It describes the progression of fractions, decimals, and percents, which helps students connect these three concepts to real-life situations. Activities such as using hundred grids and solving problems with benchmark percentages help students build a strong foundation for future learning in proportional reasoning and financial literacy.

Materials demonstrate coherence across concepts horizontally within the grade level by connecting relationships. For example, in the "Area and Volume" scope, during the Explore component of the lesson, students first calculate the area of quadrilaterals and then apply that understanding to calculate the volume of rectangular prisms, thus building upon prior learning and establishing coherence within the grade level.

In the "Equivalent Numerical Expressions" scope, students use order of operations to solve expressions. Students then build on this understanding in the "Algebraic Expressions" scope, where they transition from numerical to algebraic expressions. In addition, students represent sentences as equivalent expressions, simplify expressions, and distinguish between expressions and equations.

4.2b – Materials demonstrate coherence vertically across concepts and grade bands, including connections from grades 3–12, by connecting patterns, big ideas, and relationships.

Materials demonstrate coherence vertically across concepts and grade bands, including connections from grades 3–12, by connecting patterns, big ideas, and relationships. For example, in grade 6, in the "Fractions, Decimals, and Percents" scope during the Explore 1 section, students use a hundreds chart to represent percents, to establish a connection to using a hundreds chart in previous grade levels to represent both fractions and decimals.

The "Background Knowledge" page explains how grade 5 students classified two-dimensional figures by attributes and used hierarchy charts for triangles, establishing the base needed for grade 6 angle sum

and side-angle relationship work. The "Current Scope" page explains how students will model angle sums, relate side lengths to opposite angles, and apply the triangle-inequality theorem. A "Coming Attractions" note previews grade 7 extensions, where students write and solve equations using these same geometric facts. Together, these components provide teachers with clear connections between past learning, current expectations, and future objectives.

Students build on prior knowledge and concepts introduced in earlier grade levels to include the Explore 2 activity of the "Triangle Properties" scope. In this lesson, students draw on what they have previously learned about triangles to discuss their experiences working with angles. In the grade 4 "Angles" scope, students illustrated the angle measurements during Explore 1. This connection helps activate prior knowledge and sets a strong foundation for grade 6 angle TEKS.

4.2c – Materials demonstrate coherence across lessons or activities by connecting students' prior knowledge of concepts and procedures to the mathematical concepts to be learned in the current grade level and future grade levels.

The materials demonstrate coherence across lessons by connecting students' prior knowledge of concepts and procedures to the mathematical concepts to be learned in the current and future grade levels. The "Content Support" within the "Background Knowledge," included in all scopes, explains the relevant concepts learned in earlier grades that connect to the current lesson. When lessons build on past learning, students see how their knowledge fits together, feel more confident, and develop skills step by step. This clear path supports deeper understanding and prepares them for more advanced math in the future.

In grade 6, the "Content Support" page for the "Ratios, Rates, and Unit Rates" links last year's multiplicative-pattern work to current ratio and rate reasoning while previewing constant-rate problems tackled next year. Background notes direct teachers to double number lines and ratio tables so students transfer fraction strategies to comparing two quantities with different units. Teachers prompt students to scale equivalent ratios, convert within a system, and analyze patterns in tables—procedures that secure grade-level fluency. A "Coming Attractions" note signals that these skills support multi-step percent work and constant-rate equations in grade 7.

The STEMscopes materials demonstrate coherence across lessons by connecting mathematical concepts and procedures for enhanced student learning. For instance, in the "Positive Rational Number Operations" scope, the teacher engages students in the Explore 2: Divide Fractions lesson by asking them to discuss their experience with dividing fractions and to describe the process. Then, in the Student Journal, students reflect on their understanding and explain if they find the reciprocal strategy useful when diving. These example questions not only draw from students' existing knowledge but also help build a strong foundation for applying strategies to future grade-level math problems.

4.3 Coherence and Variety of Practice

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.3a	All criteria for guidance met.	2/2
4.3b	All criteria for guidance met.	2/2
—	**TOTAL**	4/4

4.3a – Materials provide spaced retrieval opportunities with previously learned skills and concepts across learning pathways.

Materials provide spaced retrieval opportunities with previously learned skills across learning pathways. In the Explore section of every scope, there is a Spiraled Review that integrates previous skills for students to review. For instance, in the grade 6 Spiraled Review within the "Triangle Properties" scope questions include skills learned in previous grade-level scopes, such as solving problems and equations involving negative and positive numbers. This ensures students have opportunities to recall prior knowledge and apply previously learned skills.

The Elaborate component of all scopes provides the teachers with resources to review and reinforce concepts and skills, allowing for continuous assessment of student progress. For example, in the "Banking and Credit" scope, the Spiraled Review component includes four word problems where students apply mathematical process standards to solve problems involving algebraic relationships, measurement conversions, and differentiating between additive and multiplicative relationships, providing students with opportunities to apply previously learned content.

The materials provide ongoing exposure to key skills and concepts, ensuring they are reinforced over time rather than only being presented in a single lesson. Previously taught content is incorporated into new contexts, allowing students to recall and apply what they have previously learned. Each scope includes a Spiraled Review within the Elaborate component to support retrieval opportunities. This cycling format reinforces memory and deepens understanding as learning is spaced out rather than confined to one isolated lesson.

4.3b – Materials provide interleaved practice opportunities with previously learned skills and concepts across learning pathways.

The materials provide interleaved practice opportunities that integrate previously learned concepts across learning pathways. For example, in the "Represent and Interpret Data" scope, students learn about dot plots and stem-and-leaf plots and can choose either to represent a given data set. They then explore histograms and compare them to dot plots and bar graphs, reinforcing their understanding of similarities and differences among data representations. The scope concludes with box plots, where students analyze and justify when a box plot is the most appropriate choice for representing data. This

progression encourages critical thinking and helps students apply prior knowledge to make informed decisions about data representation.

To reinforce long-term understanding, materials include a Spiraled Review component, prompting students to revisit previously taught concepts through regular, integrated practice. For example, during the Elaborate phase of the "Fractions, Decimals, and Percents" scope, students analyze discount aisle pricing scenarios and use operations with decimals and fractions to determine quantities or estimate totals. These spiral activities appear alongside current instruction and support mathematical fluency. Teachers use this resource to ensure students maintain prior knowledge while deepening their conceptual understanding of new content.

This type of interleaved practice is also found in the Explore activities in STEMscopes Math. The Fluency Practice activity includes mixed problem sets that draw on multiple previously learned skills, such as operations, number patterns, and geometry, which supports spiraled review and helps students retain and apply concepts across strands. This section is specifically designed to reinforce skills in a quick, engaging way while building accuracy and speed and encouraging students to make connections across concepts and build a deeper understanding over time.

5. Balance of Conceptual and Procedural Understanding

Materials are designed to balance conceptual understanding, procedural skills, and fluency.

5.1 Development of Conceptual Understanding

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.1a	All criteria for guidance met.	3/3
5.1b	All criteria for guidance met.	2/2
5.1c	All criteria for guidance met.	1/1
—	**TOTAL**	6/6

5.1a – Questions and tasks provide opportunities for students to interpret, analyze, and evaluate mathematical concepts and complex, real-world situations.

The curriculum for grades 6–12 provides students with tasks to interpret, analyze, and evaluate mathematical concepts in the context of complex, real-world situations by using a variety of representations, such as graphs, equations, and visuals. These tasks, located in the Explore, Explain, and Evaluate components of the scope, go beyond basic computation by asking students to apply their understanding to authentic problems, such as comparing unit rates, analyzing data sets, or solving multi-step equations within a real-life scenario. Students are required to make sense of the math, choose appropriate strategies, and justify their reasoning. This approach supports critical thinking and prepares students to use mathematics effectively in real-world decision-making.

Questions and tasks provide multiple opportunities for students to engage in mathematical thinking at a deeper level. For example, in the Hook activity of the "Area and Volume" scope, students interpret information from a real-world scenario involving building a garden with unique shapes. Subsequent activities within the Explore and Exit Tickets components of the scope require students to interpret, analyze, and evaluate mathematical concepts that help them transfer their learning from the scope to a new context.

The materials provide activities for student discussions, drawing diagrams, and structured prompts for interpretation, analysis, and evaluation of mathematical models aligned with real-world scenarios in the "Represent and Interpret Data" scope during Explore 1. In this data-matching activity, students examine how statistical questions align with dot plots and stem-and-leaf plots, interpreting the variability represented in each display. Teachers facilitate analysis by prompting students to describe distribution shape and spread using terms such as *skewed*, *symmetrical*, and *range* and to compare how visual formats communicate different data characteristics. Students justify their reasoning by selecting the most accurate graph-explanation pair and explaining how the structure of the display supports their interpretation. The Student Journal and Research Analysis Cards scaffold interpretation, analysis, and evaluation through repeated, real-world applications of data literacy.

5.1b – Questions and tasks provide opportunities for students to create concrete models and representations of mathematical situations.

Questions and tasks require students to create concrete models of mathematical situations. For example, in Explore 2 within the "Coordinate Planes" scope, students build a map of a city using building cards and number lines to represent coordinate planes. In addition, students create pictorial representations of mathematical situations under the "Skills Quiz," where students graph given ordered pairs on a coordinate plane to create a corresponding model.

Students create concrete models, such as number lines, graphs, and tape diagrams, to represent and solve mathematical situations. These models help students visualize concepts, justify their reasoning, and connect math to real-world contexts, deepening their understanding and problem-solving skills.

Students create mathematical representations in Explore 2 of the "Fractions, Decimals, and Percents" scope. Using strip diagrams or the double number line work mat, students solve mathematical situations, which they then use to develop concrete models and representations in their Student Journal. This allows students to construct their understanding to actively build and draw models rather than memorize procedures.

5.1c – Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.

Materials include tasks that ask students to apply their conceptual understanding to new and varied problem situations across different scopes. Each scope includes problem-solving tasks that connect to real-world or extended applications, allowing students to apply their learning in meaningful ways. The Explore, Elaborate, and Evaluate components of the scope provide activities that encourage students to use their conceptual understanding in new contexts, promoting flexible thinking. Additionally, tasks such as Create Your Own, Problem-Based Tasks, and Math Today offer open-ended opportunities for students to apply mathematical concepts creatively and independently, further reinforcing deeper conceptual understanding.

Students apply conceptual understanding as they explore two-variable relationships through a real-world rental scenario under Explore of the "Two-Variable Relationships" scope. They rotate through stations to analyze graphs and tables, identify dependent and independent variables, and write equations describing those relationships. For example, students calculate the cost of bike and canoe rentals by examining how prices change with hours. Then they compare equations to engage in mathematical reasoning on changing pricing structures and apply their understanding to determine missing values and generate new equations, demonstrating flexible problem-solving in authentic contexts.

Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts. For example, in every scope, within the Elaborate component, the materials provide an interactive game that simulates a real-world situation. This game requires students

to apply what they have learned to earn points. For instance, in the "Rational Numbers" scope, the interactive game Marine Lab 2020 requires students to determine what addition or subtraction to do to reach a certain answer to refill the fuel tank of their submarine.

5.2 Development of Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.2a	All criteria for guidance met.	2/2
5.2b	All criteria for guidance met.	3/3
5.2c	All criteria for guidance met.	3/3
5.2d	All criteria for guidance met.	1/1
—	**TOTAL**	9/9

5.2a – Materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level mathematical tasks.

Materials are designed to build student automaticity and fluency necessary to engage in grade-level tasks and activities. To support this goal, each grade level includes scopes specifically focused on developing math fluency.

STEMscopes Math includes targeted components such as Fluency Builder and Spiraled Review, specifically designed to support the development of automaticity and fluency. The Fluency Builder offers short, repeated practice tasks that focus on number facts, operations, and computation strategies. These tasks scaffold to move from conceptual understanding to quick and accurate recall, helping students internalize foundational math skills.

The materials provide tasks that are designed to build student automaticity and fluency to complete grade-level mathematical tasks. "Fact Fluency" resources for addition/subtraction and multiplication/division are included in the scopes for establishing a routine for students to engage in building automaticity. In addition, mathematical fluency resources provide extra practice in the following units: "Operations with Decimals" and "Operations with Fractions."

5.2b – Materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures throughout learning pathways.

STEMscopes Math embeds procedural practice across multiple components of each scope, including Explore, Explain, Elaborate, Fluency Builder, and Show What You Know. These components are intentionally designed to engage students in applying mathematical procedures that are accurate, efficient, and flexible. During Explore lessons, students participate in hands-on or conceptual tasks that allow for multiple solution strategies, encouraging them to approach problems from different angles. Materials guide teachers to foster flexibility in mathematical thinking by prompting students with questions such as "Can you solve it a different way?" or "Is there a more efficient strategy?" In the Explain and Elaborate sections, students develop and refine grade-level procedures with the support of visual models and strategic scaffolding, promoting both accuracy and efficiency. Throughout the learning

pathway, the materials provide students with repeated opportunities to apply, evaluate, and justify mathematical procedures in meaningful contexts.

Students apply efficient strategies as they solve real-world design tasks. For example, in the Explore 2 activity of the "Area and Volume" scope, students choose between decomposing figures or using area formulas to calculate the area of various polygons. Students test and revise different approaches to provide the most efficient solution. This activity supports flexible reasoning as students compare multiple approaches and methods in their mathematical processes when applying formulas. Students use grid paper to revise their work and demonstrate accuracy by labeling base and height dimensions. They refine and confirm their results through Math Chat discussions to explain how changes in base or height affect area and revise any possible errors.

Practice opportunities for students to apply mathematical procedures are integrated throughout the learning pathway. For example, in the "Algebraic Expressions" scope, students read and translate verbal descriptions into algebraic expressions, using models and the commutative properties of addition and multiplication. As they progress through the unit, students engage with increasingly complex procedures. Finally, they reflect on both the procedures and their learning, enabling them to master more advanced concepts.

5.2c – Materials provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for efficiency, flexibility, and accuracy throughout learning pathways.

Materials provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for efficiency, flexibility, and accuracy throughout learning pathways. For example, in the Explore section of the "Fractions, Decimals, and Percents" scope, students analyze the effectiveness of different models and strategies when solving percent problems. They engage in reflective questioning such as "How are models useful in solving percent scenarios?" and "Why is it important to know multiple strategies to solve various percent problems?" These discussions promote deeper conceptual understanding and strategic thinking.

Evaluation of real-world mathematical concepts appears throughout the curriculum. In the "Integer Operations" scope, students learn to add and subtract integers by making connections between visual models and standard algorithms.

Then, they apply their understanding to multiplication and division problems and the distributive property. In Explore 6, students improve their efficiency by reflecting on their observations and evaluating their solution strategies and procedures. Facilitation questions support students in developing a deeper conceptual understanding of integer operations: "What terms help you determine the signs of the numbers in the scenarios? What conclusions can you draw about the sign of the product of two or more integers based on the number of negative factors being multiplied? Why?"

The materials include multiple components across each scope that intentionally prompt students to evaluate and reflect on their mathematical thinking and the thinking of others. In the Explore and Elaborate sections, students engage with a variety of models and compare solution methods. Teachers facilitate discussions using questions such as "Which strategy is most efficient?" or "Is there another way to solve this problem?" These opportunities support students in recognizing when a particular model or approach is more suitable for a given task, promoting flexibility and efficiency.

5.2d – Materials contain guidance to support students in selecting the most efficient approaches when solving mathematics problems.

Materials provide clear instructional guidance to support students in selecting increasingly efficient approaches to problem-solving through their intentional learning progression. In the Explore phase, students begin with concrete or visual models to build a strong conceptual foundation. As students move into the Explain phase, the curriculum introduces more efficient procedures, including standard algorithms and numerical strategies, often accompanied by teacher prompts and step-by-step guidance to support the transition. In the Elaborate phase, students apply their understanding in more complex or real-world contexts and are encouraged to select the most appropriate and efficient strategy based on the task. This structured pathway is purposefully designed to help students evolve from basic, conceptual methods to more abstract and streamlined approaches, with the materials offering consistent support in recognizing and applying increasingly efficient strategies.

Materials contain guidance to support students in selecting increasingly efficient approaches to solve mathematics problems. For example, in the "Ratios, Rates, and Unit Rates" scope, within the Explore 5 section, students use equivalent ratios and rates to solve proportions. The materials provide guiding questions for the teacher to support student thinking and strategy selection, including "How are proportions helpful in finding an equivalent ratio or rate? What strategies were used to solve the proportions?" These questions encourage students to reflect on their reasoning and choose effective methods for solving proportional relationships.

The materials are designed to guide students toward selecting increasingly efficient problem-solving approaches as their mathematical understanding deepens. For example, in Explore 1 of the "Positive Rational Number Operations" scope, the lesson guide includes prompts to facilitate student thinking about efficient strategies using number lines and area models. Prompts encourage students to evaluate the effectiveness of different representations: "Which model do you prefer when multiplying fractions—the area model or the number line? Justify your answer."

5.3 Balance of Conceptual Understanding and Procedural Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.3a	All criteria for guidance met.	2/2
5.3b	All criteria for guidance met.	3/3
5.3c	All criteria for guidance met.	6/6
—	**TOTAL**	11/11

5.3a – Materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed.

STEMscopes Math helps teachers plan lessons that balance conceptual understanding (why) and procedural fluency (how) through the intentional design of the Explore and Explain lesson components. In the Explore phase, students engage in hands-on tasks using manipulatives, models, or visuals to build deep conceptual understanding of mathematical ideas. This phase emphasizes reasoning, inquiry, and real-world connections, helping students make sense of the why behind mathematical procedures. In the Explain phase, teachers are provided with clear modeling and guided practice to reinforce procedural fluency. Students transition from concrete understanding to abstract application through structured instruction and practice. These components of each scope help establish a solid foundation in math concepts and skills.

Materials explicitly state how the conceptual emphasis of the TEKS is addressed; every scope includes "Content Support," which describes how to reach conceptual understanding of the TEKS. For example, in the "Coordinate Planes" scope, the materials explain how students will graph points on four-quadrant coordinate planes using ordered pairs of rational numbers, as outlined in TEKS 6.11A. In this case, students identify the quadrants (I, II, III, IV) and the types of ordered pairs that could appear in each of the four quadrants. Additionally, they graph points using ordered pairs of positive and negative rational numbers in four-quadrant graphs, demonstrating progression from conceptual to procedural understanding.

Guidance on conceptual and procedural TEKS development is embedded in the materials. In Explore 1: Ratios, teachers use real-life examples to show that a ratio represents a comparative relationship. This builds conceptual understanding by helping students model and explain how specific quantities relate as part-to-part or part-to-whole comparisons. Students represent quantities with strip diagrams, record multiple ratios in the Student Journal, and interpret how order and labeling provide meaning in ratios, progressing from conceptual to procedural understanding of mathematical concepts.

5.3b – Questions and tasks provide opportunities for students to use concrete models, pictorial representations, and abstract models as required by the TEKS.

STEMscopes Math supports using the Concrete–Pictorial–Abstract (CPA) progression by embedding opportunities for students to engage with math concepts through hands-on materials, visual models, and symbolic representations. Each scope begins with Explore activities that incorporate concrete models such as base-ten blocks or counters. These are followed by pictorial representations such as number lines, area models, or tables, which help students visualize mathematical relationships. Finally, in the Explain and Evaluate sections, students move to abstract models such as equations and algorithms, aligning instruction with TEKS expectations and promoting a deep understanding of concepts.

Questions and tasks provide opportunities for students to use concrete models as required by the TEKS. For instance, in the Explore activities of the "Fractions, Decimals, and Percents" scope, students use a hundreds grid to understand and represent percentages. For students who need additional support, the materials provide virtual manipulatives such as a hundreds board that students use to represent percents. Using these manipulatives enables students to progress to more abstract concepts involving percents.

In the Explore activity of the "Triangle Properties" scope, students engage in hands-on tasks using concrete objects, such as straws, angle sets, protractors, and geoboards to represent angles. Students connect these models to pictorial representations to explain their work in their Student Journal. This activity prepares students to solve more abstract problems, such as using angle sum equations to find unknown angles.

5.3c – Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts, as required by the TEKS.

STEMscopes Math includes supports that help students connect, create, define, and explain concrete and representational models to abstract concepts. In the Explore activities, students engage in hands-on tasks using manipulatives such as base-ten blocks, color counters, and area mats to build conceptual understanding. The Explain component continues this learning progression by guiding students to transition from pictorial to abstract representations. Through drawing diagrams, connecting them to equations, and ultimately applying standard algorithms, students develop a deeper understanding of the relationship between models and symbolic math.

As required by the TEKS, the materials include supports that help students connect hands-on and visual models to more abstract mathematical concepts. For instance, in the Intervention component of the "Fractions, Decimals, and Percents" scope, students are supported in connecting models to percents by exploring various representations such as percent signs, fractions, decimals, and shaded 100-block grids. After the materials explain each representation and provide a shaded model example, students practice

using these formats with numbers given on the "Review Page" to promote connections between representational models and abstract mathematical concepts.

In the Explore 1: Represent Percents Using a Hundreds Grid activity, students begin by creating concrete models using the Percent Work Mat and colored pencils to shade unit squares on the hundreds grid to represent quantities as part-to-whole relationships. They then connect these models to abstract concepts by writing equivalent decimal and fraction forms. The materials also support creating representational models when students use multiple shading styles and annotations to show how percentages from the Mowing Cards activity correspond to simplified fractions and decimals. Moreover, during Math Chat, students define and explain concrete models by stating how each square represents 1 percent and justifying the corresponding representations of fractions and decimals. Students also define and explain representational models by interpreting shaded grid sections as visual benchmarks of fractional and decimal values and describing the relationships among these forms. The materials structure each modeling step in guiding students from hands-on experiences to abstract understanding.

5.4 Development of Academic Mathematical Language

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.4a	All criteria for guidance are met.	1/1
5.4b	All criteria for guidance are met.	2/2
5.4c	All criteria for guidance are met.	1/1
5.4d	All criteria for guidance are met.	2/2
5.4e	All criteria for guidance are met.	2/2
—	**TOTAL**	8/8

5.4a – Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, or other language development strategies.

Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, or other language development strategies. For example, every scope includes a Picture Vocabulary, where students reference vocabulary from the unit in the form of a slide show or flashcards. The slideshow version displays the vocabulary, a visual, and a definition to support building academic vocabulary. The flashcard version displays the vocabulary word and matching visuals. When the vocabulary word is clicked, the word is replaced with the corresponding definition. In addition, teacher guidance and facilitation points are included to enhance students' vocabulary development experience.

The STEMscopes "Philosophy" document provides the teacher with guidance and research-based experiences for students embedded in the materials for the development of mathematical language. Students engage in academic communication with the teacher and peers to foster language development. For instance, the Explore activities include teacher guidance on incorporating academic terms into student learning experiences in the lesson. In addition, these activities include discussion prompts for the teacher to guide students in communicating their thoughts and ideas.

STEMscopes Math supports the development of academic mathematical language by integrating visuals, manipulatives, and structured language support across all grade levels. The Explore activities engage students with hands-on materials such as strip diagrams, base-ten blocks, number lines, and algebra tiles. These manipulatives allow students to physically model mathematical concepts while promoting verbal expression of relationships, strengthening their ability to connect language with mathematical thinking.

5.4b – Materials include embedded educator guidance to scaffold, support, and extend students’ use of academic mathematical vocabulary in context when communicating with peers and educators.

The materials provide embedded educator guidance to help scaffold, support, and extend students' use of academic mathematical vocabulary during instruction and peer interactions. In the "Facilitation Points"

section of the lesson, teachers are given sample prompts and questions to encourage students to use precise mathematical language, such as asking students to describe mathematical relationships using correct terminology. Explore activities provide teacher guidance on how to connect academic vocabulary to students' hands-on learning experiences. Furthermore, discussion prompts encourage students to express their thinking using precise mathematical language. Utilizing these strategies supports all learners in developing and using new academic vocabulary within meaningful contexts.

The Picture Vocabulary guides the teacher to scaffold vocabulary by directing the teacher to read definitions aloud, discuss unfamiliar terms, and prompt students to make connections between new terms. Students extend their use of academic vocabulary by rephrasing definitions in their own words, adding personal visuals to their interactive notebooks, and using the terms in ongoing problem-solving and math discourse.

Materials include embedded educator guidance to support students' use of academic mathematical vocabulary in context when communicating with peers and educators. At the end of every Explore, the materials include a "Language Supports" section, which provides the teacher with recommendations on how to scaffold and support the development of academic vocabulary by providing sentence stems for students to use during group discussions. For example, in the "Rational Numbers" scope, sentence stems that promote academic discourse include: "A positive integer and a negative integer can have the same absolute value because ____. The absolute value is ___ because ___." Utilizing these sentence stems extends students' use of academic mathematical vocabulary in the classroom setting.

5.4c – Materials include embedded guidance to support student application of appropriate mathematical language and academic vocabulary in discourse.

STEMscopes Math provides embedded guidance throughout the curriculum to support students in using precise mathematical language and academic vocabulary during academic discourse. This support appears within the Explore and Explain components of each scope. By integrating these supports into lesson delivery, the curriculum ensures that students are consistently exposed to and using mathematical language in meaningful contexts, strengthening their understanding and fluency.

Materials include embedded guidance to support student application of appropriate mathematical language and academic vocabulary in discourse. Every Explore found within all lessons contains a Math Chat that includes open-ended questions for the teacher to ask the students, who then need to use academic language and content knowledge to provide answers. For instance, in the "Rational Numbers" scope, this activity includes questions such as "Are whole numbers considered rational numbers? Why or why not? Are whole numbers also integers? Why or why not?" These questions support students in accurately applying mathematical vocabulary within the correct context.

The Picture Vocabulary component in every scope supports students in applying key vocabulary terms. In the Explore section of each lesson, students read and discuss definitions of academic vocabulary presented in the lesson. Then they rephrase those definitions in their own words and connect them to

experiences and tasks they encountered throughout the lesson. Additionally, the materials support discourse by encouraging students to visualize each word and describe it aloud and by projecting slides for whole-class discussion. To extend engagement, the platform offers printable flashcards for interactive notebooks and strategies for creating a classroom math word wall, allowing students to continuously revisit and connect mathematical terms and ideas.

5.4d – Materials include embedded guidance to facilitate mathematical conversations allowing students to hear, refine, and use math language with peers.

The materials embed guidance to facilitate mathematical conversations among students. The curriculum offers "Facilitation Points," "Language Connections," and discussion prompts throughout the Explore, Explain, and Elaborate components of the scope that encourage students to engage in peer dialogue using precise mathematical language. These supports help students navigate math language through intentional discourse activities.

Materials include embedded guidance to facilitate mathematical conversations, allowing students to participate in academic discourse with peers. For example, the materials guide Structured Conversations in the "Teacher Toolbox," where they describe different strategies that allow students to engage in discourse in a structured way so that they can hear, refine, and use math language with peers. These strategies consist of Turn and Talk, Pair, Square, Share, and Walk, Talk, Decide. These teaching strategies promote deeper understanding and application of academic language amongst peers.

The collaborative tasks in the STEMscopes materials have embedded guidance to facilitate mathematical conversations that allow students to participate in math language amongst peers. For example, the Explore lesson guides include facilitation questions that the teacher can use to support mathematical conversations within the learning tasks. The Math Chats are planned at the closing of the lesson guide and facilitate mathematical conversations that allow students to hear, refine, and use math language with peers.

5.4e – Materials include embedded guidance to anticipate a variety of student answers including exemplar responses to questions and tasks, including guidance to support and/or redirect inaccurate student responses.

The materials support educators with tools that help anticipate student responses and inform teaching decisions. "Facilitation Points" in Explore and Explain offer examples of both correct and incorrect student thinking, along with recommended questions or strategies to guide students toward accurate understanding. The Evaluate sections provide rubrics and sample student work that clarify what proficient understanding should look like. These features allow teachers to quickly assess student progress and address learning gaps in real time. Furthermore, teachers can anticipate a variety of responses, identify misconceptions, and provide focused instructional support for those in need.

The materials include intervention strategies for additional student support with guidance on redirecting inaccurate student responses and solutions. For example, The "Content Support" includes a section for "Misconceptions and Obstacles" for the "Fractions, Decimals, and Percents" scope, which anticipates a variety of student answers by modeling benchmark equivalencies such as "0.40 = 40% = 2/5" across grids, number lines, and strip diagrams. Students may also express these ideas using proportional reasoning, simplified fractions, or contextual examples. The materials support and redirect inaccurate responses by naming specific misconceptions and describing challenges, such as "Students may ignore the percent symbol. Students may struggle with decimal placement." Corrective strategies include providing 10-by-10 grids, concrete models, and percent proportion visuals to reinforce the part-to-whole relationship in percent-based problems. Including possible challenges for students enables the educator to guide students to reflect on their incorrect responses and misunderstandings to reach accuracy when adding fractions with unlike denominators.

Materials include embedded guidance to anticipate a variety of student answers, including exemplar responses to questions and tasks. For example, in the Math Chat activity for the "Area and Volume" scope, the materials include possible student responses in red for each teacher prompt. For instance, for the question "Is there any difference between finding the volume using linking cubes and using the dimensions?" the materials provide the following suggested answer: "The volume will still be the same whether I find it using linking cubes or dimensions. The only difference is the method that is chosen to find the volume." Providing this support enables the teacher to be prepared with anticipated student answers and be ready to redirect student misconceptions in real time.

5.5 Process Standards Connection

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.5a	All criteria for guidance met.	1/1
5.5b	All criteria for guidance met.	2/2
5.5c	All criteria for guidance met.	1/1
—	**TOTAL**	4/4

5.5a – TEKS process standards are integrated appropriately into the materials.

STEMscopes Math integrates TEKS process standards throughout the curriculum by embedding them into lesson objectives, activities, and assessments. These standards are addressed in the "Scope Overview" and reinforced in different components of the scope, such as Explore, Explain, Elaborate, and Evaluate. For example, students engage in mathematical reasoning, problem solving, communication, and representation through hands-on tasks, discussions, and real-world applications aligned with TEKS process standards. Teacher guidance regularly shows how to support these process skills, making sure they are part of everyday learning instead of separate lessons.

The Scopes' Explore lessons include real-world problem-solving tasks to integrate TEKS process standards. For example, the guiding questions within the lessons support reasoning and communication, reinforcing the process standards. Through the facilitation and discussion questions, students outline their approach and select strategies to solve problems. Furthermore, the use of the Student Journal provides students with opportunities to create visual representations, solve problems, and justify their solutions. Additionally, reflection questions prompt students to reflect on their problem-solving process, the strategies they used, and to evaluate the reasonableness of their responses.

Small-Group Intervention activities found within all scopes integrate TEKS process standards by engaging students in in-depth mathematical activities. For example, the intervention lesson for the "Points, Lines, and Angles" scope includes a two-part task where students identify, compare, and draw geometric parts and line relationships following the required criteria and apply the concepts to visual design contexts such as home blueprints and street maps. Students color-code, label diagrams, and engage in peer dialogue to represent points, rays, angles, and relationships. Lastly, they explain how the visual representations match the geometric definitions. Activities such as these involve students in real-world mathematical situations requiring them to analyze, formulate solutions, and justify their solutions.

5.5b – Materials include a description of how process standards are incorporated and connected throughout the learning pathways.

STEMscopes Math integrates the TEKS process standards throughout its instructional design. This is evident in the "Facilitation Points" within the Explore component of every scope. These points offer teacher prompts to guide students to explain their reasoning, use representations to justify answers,

compare different strategies, and engage in peer discussions. By embedding these practices into each lesson, the materials support ongoing development of problem-solving, critical thinking, and mathematical communication. Moreover, the materials include a description of how process standards are incorporated and connected throughout the learning pathways, ensuring that students build both conceptual understanding and strategic thinking in a cohesive, integrated way.

The materials incorporate and connect the TEKS process standards throughout the learning pathways. In the Explore activities, students engage in real-world problem-solving scenarios in the lesson guide and in the Student Journal. Guiding questions throughout the lesson support students' reasoning and communication, while in the Student Journal, students create visual representations, solve problems, and justify their solutions.

The curriculum is framed around research-based strategies described in the "Math Philosophy" document. The document outlines how the process standards are embedded throughout the learning pathway. For instance, the Explore activities engage students in real-world problem-solving tasks requiring them to justify their solutions and reasoning through strategy comparisons and classroom dialogue. The program connects these standards across the learning pathway by utilizing research-based instructional strategies, such as the Concrete-Representational-Abstract (CRA) progression and "Daily Numeracy" for fluency. Integrating these instructional practices supports student progression from concrete modeling to standard algorithms, enabling them to support conceptual reasoning and mathematical communication.

5.5c – Materials include an overview of the TEKS process standards incorporated into each lesson.

The materials include an overview of the TEKS process standards embedded into each lesson through components in the "Content Support." This guides teachers in helping students apply process skills—such as problem solving, reasoning, communication, and making real-world connections—through hands-on and open-ended tasks.

Educators are provided with an overview of the process standards integrated into each lesson. For example, the Explore 1 lesson of the "Fractions, Decimals, and Percents" scope outlines the TEKS process standards addressed in the lesson. In addition, the overview explains how students will apply these standards throughout the lesson, such as shading percent values on a hundreds grid, converting between decimals and fractions, and completing tables to model real-world ratios like mowed lawns per neighborhood. Lastly, in the Math Chat, students apply their knowledge of fractions, decimals, percents, and ratios to collaborate in constructing visual models as they engage in precise mathematical language and explain their reasoning using precise mathematical vocabulary and representations.

Teacher guidance is embedded within each scope by summarizing the TEKS process standards addressed in each lesson. For example, the "Scope and Sequence" document in the "Teacher Toolbox" includes a chart outlining all standards—TEKS, mathematical process standards, and ELPS (if applicable)—covered in

each Explore component. It also provides teacher guidance on the number of Explore components, standards taught in the lesson, and the number of instructional days allotted for each lesson.

6. Productive Struggle

Materials support students in applying disciplinary practices to productive problem-solving, including explaining and revising their thinking.

6.1 Student Self-Efficacy

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.1a	All criteria for guidance met.	3/3
6.1b	All criteria for guidance met.	3/3
6.1c	All criteria for guidance met.	3/3
—	**TOTAL**	9/9

6.1a – Materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics.

Materials provide opportunities for students to think mathematically. For example, in the "Fractions, Decimals and Percents" scope, students represent percents, fractions, and decimals on hundreds grid. Next, they participate in activities where the teacher prompts students to think mathematically by asking questions, such as, "How does using a model help with fraction, decimal, and percent conversions? Why is it important to know multiple strategies to solve various percent problems?" Utilizing these questions promotes independent problem-solving skills for students to apply in future tasks.

The materials prompt students to think mathematically by working in collaborative groups to analyze real-world design problems. For example, the "Finding the Area of Quadrilaterals" scope requires students to apply visual strategies and formulas in the Explore activity to promote perseverance through solving problems. Students use multiple strategies to identify base and height, check for accuracy, and compare methods across different geometric contexts. In addition, students use flexible approaches to evaluate and justify their solutions verbally with peers and in written form in the Student Journal. Following this framework guides students through the problem-solving process.

The materials provide opportunities for students to make sense of mathematics. For instance, the Algebraic Expressions: Explore lesson prompts students to reflect on their problem-solving process and solutions by answering questions such as "Explain how to simplify expressions. Use the words coefficient, variable, and term in your explanation. Does it matter which terms you combine first when simplifying? Why or why not?" This further supports students to develop stronger conceptual comprehension rather than memorizing the procedure.

6.1b – Materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems and complete tasks.

STEMscopes Math provides students with multiple valid ways to approach and solve mathematical problems. Rather than focusing solely on a single correct method, the curriculum fosters flexible thinking

and strong reasoning skills. In both the Explore and Explain activities, students engage with a range of strategies and tools such as manipulatives and visual models such as area models and number lines, equations, and algorithms. They are then encouraged to justify their thinking and explain their solutions using appropriate academic vocabulary, reinforcing their conceptual understanding and communication skills.

Materials support students in a deeper understanding of mathematical concepts and in justifying multiple ways to complete tasks. For example, in the "Equivalent Numerical Expressions" scope, students explore various strategies for algebraic equivalence, such as utilizing algebra tiles, commutative and associative properties, and equations. In the Explore component of the lesson, students complete guided practice problems using a specific method (e.g., using manipulatives, symbolic representations, and standard calculation). Then, as a class, they discuss the different strategies and discuss their approaches, identifying how each method helped them understand the problem and which was more efficient or accurate for that type of problem. This comparison promotes flexibility in thinking and deepens conceptual understanding.

The materials support the students in understanding, explaining, and justifying that there can be multiple ways to solve problems. In the "Measure of Data" scope, students learn multiple approaches to represent and analyze data to accurately make sense of representing data. In the Explore component of the lesson, students justify their reasoning with models and determine which representation is better for a specific type of data and demonstrate their understanding with the following question: "Describe what each graph is better at representing. Which graph makes it easier to find the interquartile range? Can all graphs give you the same measures of data? Give one example." These varied approaches allow students to select the method that makes the most sense to them.

6.1c – Materials are designed to require students to make sense of mathematics through multiple opportunities for students to do, write about, and discuss math with peers and/or educators.

The curriculum offers multiple opportunities for students to actively engage with mathematics by doing, writing about, and discussing concepts. Students are frequently asked to write about their thinking in Interactive Journals, Exit Tickets, and Elaborate activities. For example, after solving a multi-step problem, students explain their method, compare it with a partner's strategy, or justify their problem-solving approach. These writing tasks help them organize their ideas, clarify misconceptions, and deepen their understanding.

Materials are designed to require students to make sense of mathematics through multiple opportunities for students to do, write about, and discuss through peer collaboration. For instance, in the "Coordinate Planes: Skill Review and Practice" activity, which may be used for small-group intervention, students interpret quadrant placement and explain graphing processes in writing using printed review materials with peers as needed. Students utilize a variety of strategies, such as visuals, solution statements, and

step-by-step recording to analyze coordinate planes. During this activity, students reflect on questions, such as, "What information tells the direction to plot right or left and up or down?" This framework facilitates peer-to-peer and teacher-guided math discourse and promotes writing in mathematics.

The materials engage students in opportunities to discuss mathematical concepts. For example, in the Fractions, Decimals and Percents: Explore 3 scope, students work in groups to solve problems found in Sales Ad cards. They engage in mathematical discourse based on real-world concepts amongst peers on prompts such as "Give examples of two real-world situations where you would use fractions. Give examples of two real-world situations where you would use decimals." After peer-collaboration, they record their responses in their Student Journal, creating a structure where students reflect and write in a mathematical classroom setting.

6.2 Facilitating Productive Struggle

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.2a	All criteria for guidance met.	8/8
6.2b	All criteria for guidance met.	4/4
—	**TOTAL**	12/12

6.2a – Materials support educators in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, justifications, and multiple points of entry.

The materials support teachers in guiding students to share and explain their problem-solving strategies by embedding instructional guidance and feedback tools throughout the curriculum. Each scope includes "Procedure and Facilitation Points" that prompt teachers to ask students to reflect on their reasoning, compare methods, and justify their solutions. For example, teachers might be directed to ask, "How does your model represent the problem?" or "Why does this strategy work?" These prompts help foster mathematical discourse amongst peers.

Materials support educators in guiding students to reflect on their problem-solving approaches, including explanations, arguments, and justifications. For example, in the Fractions, Decimals and Percents: Explore 2 lesson, the teacher guides the students to reflect on their problem-solving approaches by asking questions, such as, "How can you use benchmark percentages to solve percent problems? How can you find 10% of 400 using a strip diagram?" These questions require the students to use metacognitive skills to deepen their understanding of mathematical concepts.

The materials support educators in guiding students to reflect and share their explanations of their mathematical processes. For instance, in the "Algebraic Expression: Explore 1" lesson, students explore equivalent expressions by using the Commutative Property of Addition and the Commutative Property of Multiplication. Then, the students reflect in their Student Journal by responding in writing to the following prompts: Sai and Annika wrote expressions to represent "the quotient of the average length, x, and 5." Which student was correct? Explain." Posing these types of questions for students promotes in-depth mathematical reasoning skills.

6.2b – Materials include prompts and guidance to support educators in providing explanatory feedback based on student responses and anticipated misconceptions.

STEMscopes Math includes embedded teacher support in delivering explanatory feedback aligned with student responses and anticipated misconceptions. This support is primarily found in the "Procedure and Facilitation Points" within the Explore, Explain, and Evaluate sections of each scope. These points prompt teachers to closely observe student thinking and provide suggestions for addressing common errors. Instead of immediately correcting mistakes, the guidance encourages teachers to ask targeted questions

that help students reflect, revise, and deepen their understanding, reinforcing both conceptual development and problem-solving skills.

The materials include prompts for explanatory feedback based on student responses and anticipated misconceptions. For example, in the Show What You Know – Add Integers Using Concrete Models lesson, students draw two-color counter models for each real-world scenario, write a corresponding integer expression, and solve using standard algorithms. Teachers evaluate accuracy and reasoning at each step and are guided in providing feedback using structured problem-solving routines and visual representations to clarify common misunderstandings. Additionally, teacher facilitation guidance encourages the use of manipulatives and student reasoning to determine if intervention is needed, which supports targeted responses to misconceptions. This framework ensures the educator provides timely feedback.

The materials include prompts and guidance for educators to support student understanding. For example, the Fractions, Decimals, and Percents: Explore 1 lesson guide provides prompt guidance for explanatory feedback. For example, feedback prompts and teacher guidance from the "Facilitation Points" include guidance such as "If students need additional support during Part I, encourage them to start with the fraction given in the Mowing Card and create an equivalent fraction with a denominator of 100. Then ask how you could model that on the hundreds grid, and write it as a decimal. Last, write the percent." This guide encourages students to reflect on their problem-solving process while the educator addresses misconceptions.