

IMRA Review Cycle 2024 Report



Publisher Name	Program Name
Accelerate Learning	STEMscopes Texas Math
Subject	Grade Level
Mathematics	8

Texas Essential Knowledge and Skills (TEKS) Coverage: 100%
English Language Proficiency Standards (ELPS) Coverage: 100%
Quality Review Overall Score: 227 / 227

IMRA Reviewers

Flags for Suitability Noncompliance 0

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

Flags for Suitability Compliance 5

Indicator	Count of Flags
Alignment with Public Education’s Constitutional Goal, 2.1.1	5
Promoting Sexual Risk Avoidance, 6.2	0

Alleged Factual Errors 0

Public Feedback

Flags for Suitability Noncompliance 0

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

Alleged Factual Errors 0

Public Comments 0

Quality Review Summary

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

Strengths

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

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

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

- 5.4 Development of Academic Mathematical Language: Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, and language strategies, with embedded teacher guidance on scaffolding vocabulary, syntax, and discourse, and supporting mathematical conversations to refine and use math language.
- 5.5 Process Standards Connections: Materials integrate process standards appropriately, providing descriptions of how they are incorporated and connected

throughout the course, within each unit, and in each lesson.

- 6.1 Student Self-Efficacy: Materials provide opportunities for students to think mathematically, persevere through problem-solving, and make sense of mathematics, while supporting them in understanding multiple ways to solve problems and requiring them to engage with math through doing, writing, and discussion.
- 6.2 Facilitating Productive Struggle: Materials support teachers in guiding students to share and reflect on their problem-solving approaches, offering prompts and guidance for providing explanatory feedback based on student responses and anticipated misconceptions.

Challenges

- No challenges were noted in the materials.

Summary

STEMscopes Texas Math is a Mathematics 6–8 program. The materials promote conceptual understanding of mathematics through hands-on exploration, inquiry, and analysis using the research-based 5E + IA model (Engage, Explain, Elaborate, Evaluate, Intervention, and Acceleration). They offer vertically aligned instructional materials that cover all TEKS and ELPS. The materials support students by building concrete understanding before transitioning to representational models and abstract representations. The materials provide detailed guidance for teachers, administrators, and families. Additionally, they includes resources in both English and Spanish that benefit all learners, including students with disabilities, emergent bilingual students, and gifted and talented students.

Campus and district instructional leaders should consider the following:

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

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

Intentional Instructional Design

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

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

Evidence includes, but is not limited to:

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

- Grade 8 > Teacher Toolbox > *Essentials* > *Curriculum Design* provides a scope and sequence that outlines each unit by name, TEKS, ELPS, and MPS. The outline also includes the total instructional days allotted for each unit.
- Each unit and lesson in grade 8 materials includes an overview that outlines key concepts, a suggested calendar that identifies a scope and sequence, and content support that outlines the TEKS. For example, grade 8 Real Numbers, Explore 1 outlines process standards and ELPS by saying "The following English Language Proficiency Standards are supported: 1.ABCEFH, 2.CDEGHI, 3.BCDEFGHJ, 5.BDEFG."

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

- The Teacher Toolbox, Lesson Planning Resources guides assist teachers in planning out the daily and weekly agendas based on a five-day week for 50-minute and block, 90-minute classes. Each document includes templates for both whole-group and small-group plans.
- Grade 8 materials include Suggested Scope Calendars that offer pacing for whole-group and small-group implementation for each set of Explore activities within the unit.
- In grade 8, Teacher Toolbox, Essentials, Curriculum Design, Implementation Guide, a suggested pacing calendar for 180 days is provided. The guide states that "suggested activities...can be added or removed" to provide for other calendars and gives suggestions for 165 days and more than 180 days.

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

- Materials include a grade 8 *Course Rationale Document* that provides a written explanation of unit order and how recurring topics appear throughout the units as well as a description of the vertical alignment of standards throughout the course. For example, the Real Numbers unit course rationale is to "deepen [students'] their understanding of the number system by exploring sets and subsets of real numbers, including rational and irrational numbers...Students approximate irrational numbers and convert between standard decimal notation and scientific notation, which are essential skills for grasping the vastness and precision of the real number system."
- Materials include a grade 8 *Course Rationale Document* that provides a chart showing how units are connected to the standards in four categories: 1) Number and Operations, 2) Proportionality, 3) Expressions, Equations, and Relationships, and 4) Measurement and Data.

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

- The Suggested Scope Calendar for each unit lesson, under the planning section, includes a lesson internalization component. This includes guidance on how to read through lessons, connect lessons to tasks, and assess student progress. Within the *Teacher Guide*, there is a template for lesson internalization that provides the teacher with a place to annotate.
- The *Teacher Guide* provides step-by-step facilitation notes, procedures, and materials needed for teachers for each day's lesson in the scope. The guide begins with a summary of the scope, the vertical alignment of topics, and the standards. It also provides space for teachers to plan out their own steps as they make adjustments. For example, grade 8, Real Numbers, Overview, Teacher Guide has boxed and lined sections for each Explore activity titled "Notes" for teaching planning.
- Grade 8 materials utilize the 5E Model as a visual representation to guide the internalization expectation for each unit.

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

- Grade 8 materials provide resources to support administrators and instructional coaches as a practical guide. For example, there is a description of features and elements, including implementation, to help students at multiple levels. The Implementation Guide outlines how to use differentiation, multiple languages, and digital curriculum to guide administrators and instructional coaches more.
- The Implementation Guide includes guidance and support for administrators and instructional coaches to implement the materials as designed. The implementation guide includes foundational teacher actions for administrators and coaches to watch during observation and a chart to use as an observation tool.

Intentional Instructional Design

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

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

Evidence includes, but is not limited to:

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

- In grade 8 materials, each unit provides a *Teacher Guide* that summarizes the unit and the vertical alignment that highlights background knowledge and future expectations. For example, in grade 8 Real Numbers, Home, Scope Overview, the paragraph begins with "Students in previous grade levels classify rational numbers and describe the relationship between sets and subsets of rational numbers using visual representations such as Venn diagrams." The overview clearly shows the connection to previous grade levels and then continues to show the connection to the next grade level.
- In grade 8 materials, each unit highlights the academic vocabulary necessary to effectively teach the unit found in the Content Support section." One example can be found in grade 8 Real Numbers, Content Support, where there is a list of Terms to Know.
- Each unit in Grade 8 materials provides supplementary activity handouts with a list of options for teachers to meet the diverse needs of their students with academic vocabulary. For example, Grade 8 Real Numbers, Explain, Picture Vocabulary includes procedure and facilitation points, slide shows, tips and tricks, and flashcards to help meet student needs.

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

- Grade 8 materials provide support for families through a *Take-Home Letter* in each unit in both English and Spanish. The letter contains key points of the lesson, academic vocabulary, and suggestions on activities. For example, grade 8 Real Numbers, Home, Take-Home Letter includes several problems with solutions and explanations, a list of academic vocabulary, and ways to connect learning to everyday life. The last section of the letter offers this connection,

"Use a weather app to track the temperatures in different parts of the world. The temperatures can be graphed to show coldest to warmest temperatures."

- Grade 8 materials in each unit provide content support to families through related videos. For example, the grade 8 Real Numbers, Home, Content Support shows background knowledge, visual organizers, and a look ahead to help explain new topics seen in the unit.
- Grade 8 materials provide support and guidance for families with videos on the *Quantile Parent Guide* in the Teacher Toolbox. This video shows the difference between Lexile and Quantile measures and how parents and families use their student measures to support students at home with online resources.

Intentional Instructional Design

1.3	Lesson-Level Design	34/34
1.3a	Materials include comprehensive, structured, detailed lesson plans that include daily objectives, questions, tasks, materials, and instructional assessments required to meet the content and language standards of the lesson.	30/30
1.3b	Materials include a lesson overview outlining the suggested timing for each lesson component.	1/1
1.3c	Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson.	2/2
1.3d	Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, enrichment).	1/1

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

Evidence includes, but is not limited to:

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

- Grade 8 materials for each unit contain a *Teacher Guide*, which includes objectives, tasks, materials list, preparation needed, and procedure and facilitation points that walk teachers through each lesson. Each unit is broken into stages: Engage, Explore, Explain, Elaborate, Evaluate, Intervention, and Acceleration. The *Teacher Guide* provides the entire unit in one document.
- In grade 8, Math Home Screen, the materials provide a Suggested Scope Calendar. The Suggested Scope Calendar uses clear language to provide detailed student and teacher actions, guidance on lesson internalization, content unwrapping, support, and methods for accessing students' prior knowledge.
- Grade 8, Rational Numbers, Explore 1 shows evidence of daily objectives, TEKS, DOK questions and answers, student tasks, exit tickets, and instructional assessments. Content and language support also ensure mastery of the lesson.

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

- Grade 8 materials for each unit provide a Suggested Scope Calendar that offers daily and weekly lesson plan templates with daily posted lesson objectives, warm-up options (5–10 minutes), focus lesson options (20–30 minutes), closure, and formative assessment options.
- Grade 8, Real Numbers, Teacher Guide clearly directions teachers in the procedure and facilitation points to "allow 2 minutes of thinking time" and "allow 2–5 minutes of discussion."
- Grade 8 materials include Lesson Planning Resources in the Teacher Toolbox, which provides four different weekly schedule documents based on a five-day week for two different schedule types (50-minute and block 90-minute).

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

- Grade 8 materials in each unit include a lesson overview, materials section, and preparation section that details how to set up and use the materials. For example, in grade 8, Real Numbers, Accessing Prior Knowledge, the lesson overview lists the materials and provides an area for teachers to retrieve necessary documents.
- Grade 8 materials include a list of teacher and student materials in each lesson and activity. For example, in grade 8, Real Numbers, Explore 2, materials are categorized as printed, reusable, and consumable. Materials specify for each item in parenthesis if they are per student, per pair, per group, or per class.

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

- Grade 8 materials provide options for extension and enrichment in each unit in the "Elaborate" and "Acceleration" sections. For example, in grade 8, Real Numbers, Acceleration, students participate in a "Would You Rather" activity. Another example is in grade 8, Real Numbers, Elaborate, where guidance is given for spiraled review, interactive practice, PhET, data science, and fluency builder.
- Grade 8 materials include interactive components for students to work independently in the "Explain" section of each unit. For example, in grade 8, Real Numbers, Explain, and Show What You Know activities provide students a chance to interact with Google Forms, participate in the student dashboard, or work on printed PDF documents provided by the teacher. Teachers have the option to assign the activities as independent practice or homework.

Progress Monitoring

2.1	Instructional Assessments	24/24
2.1a	Materials include a variety of instructional assessments at the unit and lesson level (including diagnostic, formative, and summative) that vary in types of tasks and questions.	12/12
2.1b	Materials include the definition and intended purpose for the types of instructional assessments included.	2/2
2.1c	Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments.	2/2
2.1d	Diagnostic, formative, and summative assessments are aligned to the TEKS and objectives of the course, unit, or lesson.	6/6
2.1e	Instructional assessments include standards-aligned items at varying levels of complexity.	2/2

The materials include a variety of instructional assessments at the unit and lesson level (including diagnostic, formative, and summative) that vary in types of tasks and questions. Materials include the definition and intended purpose for the types of instructional assessments included. Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments. Diagnostic, formative, and summative assessments are aligned to the TEKS and objectives of the course, unit, or lesson. Instructional assessments include standards-aligned items at varying levels of complexity.

Evidence includes, but is not limited to:

Materials include a variety of instructional assessments at the unit and lesson level (including diagnostic, formative, and summative) that vary in types of tasks and questions.

- Grade 8 materials provide a Package Assessment in the assessment tab, including pre-tests, mid-tests, and post-tests. Each of these has a description of the intended use. For example, the Pre-Assessment has a description that reads, "The Pre-Assessment will assess the standards from the previous grade level." The description informs teachers that the test should be a diagnostic assessment.
- Each unit in the grade 8 materials includes skill quizzes, standard-based assessments, technology-enhanced questions, checkups, exit tickets, projects, and performance tasks to use for formative assessment. For example, grade 8 Equations and Inequalities, Evaluate includes a Mathematical Modeling Task and grade 8, Equations and Inequalities, Acceleration includes a Would You Rather activity. A "choice board" project is included in the same unit under Acceleration. Each of these provides a different type of task for students to show understanding.
- In grade 8 materials, the "Assessment" tab allows teachers to create diagnostic, formative, and summative assessments with a variety of tasks, including plotting on a number line, fill-in-the-blank, multiple-choice, and short-constructed response questions. These assessments

are administered digitally or in print, in English or Spanish.

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

- In each grade 8 unit, the Suggested Scope Calendar defines diagnostic, formative, and summative assessments. Each assessment listed has a label D (diagnostic), F (formative), or S (summative) and has a rationale for when and why to use the assessment. For example, Real Numbers, Suggested Scope Calendar lists Standards-Based Assessment (S) as an assessment option and follows it with the description, "Students demonstrate mastery of the key concepts and skills in the scope through a standards-based summative assessment."
- The "Assessment" tab of the grade 8 materials provides pre-, mid-, and post-assessments with a definition to inform teachers of when and how to use each. For example, under pre-assessment, the materials state, "The intent of the assessment is to evaluate students on standards they have already learned. This means the pre-assessment will assess the standards from the previous grade level." This description defines diagnostic assessment and clarifies how it evaluates learning.
- Each of the grade 8 skill quizzes is defined as a formative assessment meant to determine student fluency with key concepts. For example, the grade 8 Real Numbers Skills Quiz is defined as "a short, standards-based formative assessment."

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

- Under "Evaluate," each unit assessment provides procedure and facilitation points, tips and tricks, and answer keys for accurate administration. For example, in grade 8 Real Numbers, Evaluate, Standards-Based Assessment under Procedure and Facilitation Points, teacher directions are "1. Distribute the Student Handout to each student. 2. Prompt students to show what they know in completing the assessment. 3. Allow students to reflect on their performances using the Heat Map."
- Under "Evaluate," each unit assessment and quiz provide preparation instructions, procedure and facilitation points, tips and tricks, and answer keys for accurate administration. For example, grade 8, Real Numbers, Evaluate, Skills Quiz directs that "once data has been collected, refer to the scaffolded instruction guide to differentiate instruction for each student."
- Each unit contains a Suggested Scope Calendar under the "Home" tab which guides teachers on consistent timing when administering assessments. For example, grade 8, Real Numbers, Home, Suggested Scope Calendar on Day 12 directs teachers that Standards-Based Assessment should take 30 to 45 minutes, Skills Quiz should take 30 to 45 minutes, and Mathematical Modeling Task should take 15 to 30 minutes.

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

- Each grade 8 unit contains an Observation Checklist that outlines the aligned TEKS for formative monitoring. A side-by-side table is provided in the observation checklist for both the student and teacher. It matches each skill or concept with its correlating standard and its subsequent description of how it is being covered. For example, the grade 8 Real Numbers, Evaluate, Observation Checklist shows the first standard of 8.2A describing skill or key concept, "Extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers." Then under "How was the skill or concept observed?" the list includes physical modeling, pictorial modeling, problem solving, discussion, and written explanation."
- Each unit in grade 8 includes a heat map that outlines the aligned TEKS for the skills quizzes (formative) and standards-based assessments (summative). The heat map contains a side-by-side table that matches each question with its corresponding standard for students and teachers to track progress. For example, in grade 8, Equations and Inequalities, Evaluate, Heat Map gives a color-coded key that differentiates miscalculation, explanation, or misconception errors. The chart then provides the standards associated with the unit content and the questions that align with that standard.
- Grade 8 materials provide Benchmark Assessments in which the question details provide the TEKS correlation for each assessment item, the answer key, and the topic and unit with which the question aligns in the materials. For example, when Details is selected on Question 1 of the *STEMscopes Texas Math Grade 8 Pre-Assessment*, the *Standards* section reads, "*Texas Math > Texas Essential Knowledge and Skills for Mathematics > 7.2A, STEMscopes Texas Math Review > Texas Essential Knowledge and Skills for Mathematics > 7.2(A).*"

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

- In each unit of grade 8 materials, the "Evaluate" section provides answer keys in which the complexity of each question is listed in the form of depth of knowledge (DOK). For example, grade 8, Equations and Inequalities Evaluate, Standards-Based Assessment, Answer Key indicates question 5 is DOK 2. These labels show varying levels of complexity.
- The grade 8 Benchmark Assessments provide questions of varying complexity, including dropdown, fill-in, drag-and-drop, and graphing. For example, *STEMscopes Texas Math Grade 8 Post-Assessment* contains 23 multiple choice, one card sorting, three fill-in-the-blank, and three Griddable questions.

Progress Monitoring

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

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

Evidence includes, but is not limited to:

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

- Every unit in grade 8 includes a *Scaffolded Instruction Guide*, which guides teachers in interpreting and responding to specific standards. The guide also provides details for interpreting and responding to overall percentile ranges from a diagnostic assessment. For example, the Real Numbers, Home, Scaffolded Instruction Guide shows a table of percentile range categories corresponding to previous grade level remediation, grade level with supports, grade level, and extending grade level.
- Each grade 8 unit provides a *Teacher Guide* that shows evidence of teacher planning in response to student performance. For example, Real Numbers, Scope Overview, Teacher Guide provide an assessment planner with questions teachers ask after intervention to ensure mastery. The instructions are "Use this template to decide how to assess your students for concept mastery. Depending on the format of the assessment, teachers can identify prompts and intended responses that would measure student mastery of the expectation."
- In the Evaluate section of each grade 8 unit, a heat map is provided to guide teachers in responding to student performance after assessments. Based on the focused standard, the heat maps offer feedback on each student's specific areas of strength and weakness through color coding, which visually indicates issues of miscalculation, lack of explanation, and misconception.

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

- Each unit in the grade 8 materials contains a Skill Review, and Practice in the Intervention section. This section outlines specific actions for teachers and students to use quick checks,

reviews, small groups, and independent practice for students based on scores for each standard. For example, Real Numbers, Intervention, Skill Review, and Practice shows procedure and facilitation points such as "3. Use the skill rubric at the end of the Quick Check to identify which students require additional help on the skills." and "5. Each student should complete the Review as an intervention or an individual activity. Optionally, pull students into a small group to work on review skills."

- Every grade 8 unit includes a *Scaffolded Instruction Guide*, which guides teachers in interpreting and responding to specific grade 8 standards. The guide also provides details for interpreting and responding to overall percentile ranges from a diagnostic assessment. For example, the Real Numbers, Home, Scaffolded Instruction Guide shows a table broken down into four categories with descriptions and links to provide an appropriate response. The "Previous Grade Level Remediation" category begins with skills review and practice, fluency builder, and skills quiz with lesson links.
- The Teacher Toolbox, Lesson Planning, and Differentiation Pathways Guide suggests ways for teachers to divide students into small groups and use a separate resource or strategy specific to any lesson or skill being taught. For example, the grade 8 Differentiation Pathways Guide provides a table with elements for assessing mastering levels. Then, it shows resources teachers use with students who meet grade level, approach grade level, or perform below grade level.

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

- Each grade 8 unit provides an Observation Checklist for students to track their progress by standard. The checklist is a student-friendly document with each standard including an "I can" statement, a "How could you show you know this?" checklist, and a "How would you rate yourself?" scale with icons. For example, the Real Numbers, Evaluate, Observation Checklist begins with the 8.2A statement, "I can extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers."
- Every unit in grade 8 provides a heat map in the Evaluate section that helps students align each skill assessment question to the corresponding state standard and reflect on their confidence, challenges, errors, and future avoidance of errors. For example, in Fractions, Decimals, and Percents, the Evaluate heat map begins with the directions, "Refer to your answers on the Skills Quiz. Color the correct question boxes green, and color incorrect question boxes according to the following key."
- The Teacher Toolbox for grade 8 includes a Goal-Setting Form and a lesson plan for teachers to help students set and track goals. The handout consists of "I can" statements that students fill out and then checkmark when the goal is met. Prompts are provided for setting small benchmark goals as well as long-term goals.

Supports for All Learners

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

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

Evidence includes, but is not limited to:

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

- Each unit in grade 8 has a Scaffolded Instruction Guide that aids teachers in providing interventions and differentiated instruction for students who have not met proficiency. For example, in Functions, the guide is broken into four categories: Previous Grade Level Remediation, Grade Level with Supports, Grade Level, and Extending Grade Level. Each category has a pair or group of scaffolded lessons and activities with links provided.
- The Teacher Toolbox contains an Intervention tab that provides teacher guidance for using a variety of differentiated instruction modalities such as visuals and manipulatives to support those who have yet to reach proficiency in grade-level skills. As a table, this guide includes strategies and activities to be utilized when students need additional support, e.g., utilizing manipulatives, labeling objects, physical demonstrations, peer talk, and play-based learning. For example, next to Modifying Instructions, the guide states "Include concrete examples in each set of instructions on the assessment to assist students' understanding of expectations."
- The Teacher Toolbox includes a Differentiation Pathway Guide in the lesson planning resources. The guide provides scaffolded lessons within the content to address different proficiency levels of masters, meets, and approaches. For example, under "Approaching," the guide states "If students have some knowledge of the content, then they can gain understanding of the important concepts using the following elements."

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

- Each unit in the grade 8 materials includes Language Connections, Interactive Vocabulary, and Picture Vocabulary lessons in the Explain section that provides pre-teaching vocabulary using student-friendly definitions. For example, in Functions, under Explain, Picture Vocabulary, there are procedure and facilitation points as well as tips and tricks. There is also a visual slideshow for teachers to present to the class, guiding questions such as "How can you connect this word to your work?" and visual vocabulary cards for students to add to their notebooks.
- Each unit in the grade 8 materials includes a Content Unwrapped in the "Home" section that details pre-teaching guidance and embedded supports for defining academic language that may be unfamiliar to students. This section identifies key verbs and nouns that students need to know. For example, Real Numbers, Content Unwrapped begins the teacher's directions with "What should students be doing? approximate: to find a number that is close to the given number on a number line; convert: to change the form of measurement using different units without changing the size or amount of the quantity being measured."
- In each Explore section of each unit in grade 8, there are Instructional Supports and Language Supports embedded to assist teachers in teaching vocabulary. For example, the materials in Real Numbers, Explore 2 state "After the Explore, have students create vocabulary squares for the term *irrational number*. Vocabulary squares should include the following sections: Definition, Example (math problem), Nonexample, and Image."

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

- Each unit provides a Scaffolded Instruction Guide that gives suggestions and links to activities based on assessment data that is broken into four categories including Grade Level and Extending Grade Level. For example, the materials in Real Numbers, Scaffolded Instruction Guide provide teacher guidance for differentiated instruction for students who have demonstrated proficiency in grade-level content for standard 8.2b specifically with the activities Picture Vocabulary, Interactive Vocabulary, Interactive Notebook and Interactive Activity, Splatball.
- Each unit in grade 8 culminates with an enrichment activity for students who show proficiency on grade-level skills. These activities include a project-based learning activity, a research project, and a creative project that synthesizes content and student learning. For example, the Acceleration tab in Grade 8, Functions has "Would You Rather" and "Choice Board" activities that align with the concepts of the unit. The Would You Rather activity states it is "an enriching activity for students to use mathematical reasoning and creativity to justify an answer."
- Throughout the unit activities, like the ones in the Explore section, there are multiple instructional supports that include teacher directions for extension when students show proficiency with grade-level content. These teacher notes include differentiated extension questions and/or activities. For example, Functions, Explore materials state "encourage students to create a scenario where the input and/or output contain negatives. With a partner, create each other's representations, and discuss whether negative values affect the definition of a function."

Supports for All Learners

3.2	Instructional Methods	13/13
3.2a	Materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly).	6/6
3.2b	Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches.	4/4
3.2c	Materials support multiple types of practice (e.g., guided, independent, collaborative) and include guidance for teachers and recommended structures (e.g., whole group, small group, individual) to support effective implementation.	3/3

The materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly). Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches. Materials support multiple types of practice (e.g., guided, independent, collaborative) and include guidance for teachers and recommended structures (e.g., whole group, small group, individual) to support effective implementation.

Evidence includes, but is not limited to:

Materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly).

- Each unit in the materials includes a Teacher Guide in the "Home" section under Scope Overview that gives step-by-step prompts and guidance that support teachers when giving directions, introducing topics, and addressing misconceptions. The guide includes facilitation tips for all levels, pre- and post-activity questions for exploration, detailed materials and lesson preparation guidelines, and tips for accessing interactive sessions for student use found in the Elaborate section. For example, in the Engage portion of the Real Numbers, Scope Overview, Teacher Guide a facilitation tip is given to "Explain the situation while showing the video behind you: Amarillo is experiencing an unprecedented cold front...Ask students the following questions: What do you notice? What do you wonder? Where can you see math in this situation?" Various sample answers are provided in the Teacher Guide.
- Under Content Support in the "Home" section in each unit, the materials include prompts and guidance for each isolated concept. For example, Real Numbers, Content Support prompts teachers to use a number line to teach estimating square roots. Examples are given with number lines and explanations for how to approximate without using technology.
- Each activity within the materials includes prompts and guided instructions labeled as "Procedure and Facilitation Points" to support the teacher in communicating, explaining, and modeling the concepts directly and explicitly. These also include Depth-of-Knowledge (DOK) questions, answers that teachers should expect, and question stems to communicate and model the concepts. For example, the Real Numbers, Explore 1 procedure and facilitation points guide the teacher to read a scenario to the class, ask a prompting question, and then

monitor students to check for understanding as needed using guiding questions listed in the teacher's directions. Sample answers are provided for each question.

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

- The materials provide recommendations for effective delivery using a variety of instructional approaches through the 5E Model which is broken down and explained in the Teacher Toolbox. Each lesson is separate through Engage, Explore, Explain, Elaborate, and Evaluate and each one has different instructional approaches. For example, in Real Numbers, Engage, students go through a hands-on activity that includes a connection to background knowledge with an oral facilitation activity, and in Real Numbers, Explore, students are provided with group, writing, and oral facilitation activities.
- Materials include teacher guidance and recommendations for effective lesson delivery and for facilitating tasks that allow active participation, exploration, and discovery through Preparation and Procedure and Facilitation Points. For example, in Real Numbers, Explore 3, the procedure and facilitation points section provides support in how to clear up student misconceptions: "If students need additional support with ordering numbers...allow them to use calculators as needed to convert numbers to decimals." Other additional support prompts are given as well. Then a prompt is given for students who need an additional challenge: "Have students develop an algorithm or method for efficiently ordering sets of real numbers with irrational numbers."
- Materials include teacher guidance that employs a variety of instructional approaches for effective lesson delivery including Math Talks, Turn-and-Talk, Whole-Group Discussions, and Mathematical Modeling Tasks. For example, in Teacher Toolbox, Structured Conversations various instructional approaches to intentional discourse include routine use of activities such as Four Corners, Gallery Walk, Pair Square Share, Walk Talk Decide, and Around The Room.

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

- The Suggested Scope Calendar and Scope Overview, Teacher Guide in the home section of each unit in the materials show headings and labels that aid teachers in distinguishing between different types of practice (guided, independent, and collaborative) within the lesson structure. For example, Pairs of Linear Equations, Suggested Scope Calendar details lesson objectives, warm-up activities, a focus lesson, independent work, and student homework options. The Real Numbers, Scope Overview, Teacher Guide shows directions for a group activity in the Accessing Prior Knowledge section, directions for guided practice in the Explore section, and directions for independent practice in the Skills Review and Practice section.

- The Scaffolded Instruction Guide in each unit provides a variety of options and resources for students to practice and apply the concepts learned including whole group, small group, individual, partner, and project-based activities. For example, the Functions, Scaffolded Instruction Guide lists activities for all students in Hooks, Explores, Show What You Know, and Skills Quiz. Then the guide shows activities for smaller differentiated groups of students to work in small groups, partners, or individually based on the need for previous grade level remediation, grade level instruction with supports, grade level instruction without supports, and extending grade level activities.
- Each lesson within the unit shows a variety of teacher guidance for effective implementation with multiple types of practice. For example, in Real Numbers, Engage, teacher guidance is to have "students share with shoulder partners." In the same unit Explore 1, teacher guidance is to "plan to divide the class into groups of 2–4 students." In the "Intervention" section of the unit, the teacher guidance indicates using the skill review and practice while also ensuring students independently complete the Quick Check.

Supports for All Learners

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

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

Evidence includes, but is not limited to:

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

- The materials provide linguistic accommodations for Emergent Bilingual students in developing academic vocabulary by providing sentence stems that support both oral and written discourse and are tailored to different proficiency levels (beginner, intermediate, and advanced) by domain. For example, in the Multilingual Learners section of the Teacher Toolbox, teachers are told "Language acquisition...process is continuous and open-ended and it differs across language domains (listening, speaking, reading, and writing) depending on factors such as context or situation." Additionally, the Proficiency Levels by Domain section provides an overview of how students are applying language as well as methods and tools designed to engage students in using increasingly more academic language.
- The Explore activities in every unit include Language Supports with guidance on supporting students at different levels of listening, speaking, reading, and writing proficiency. For example, Volume, Explore 1 shows the following English Language Proficiency Standards are

supported: 1.AFCEH, 2.CDGH, 3.ABCDEFHG, 4.GIJK. Guidance states "Clarify multiple meanings of the word volume when used to describe the space of a 3-D figure as opposed to the volume of music or speech."

- Grade 8 materials emphasize ways in which the teacher builds academic vocabulary as the unit progresses, such as anchor charts, cognate charts, image collages with labels, and vocabulary walls. In Volume, Explain, the Language Connections section supports linguistic and cultural background knowledge for connections to vocabulary at various proficiency levels. Under listening and speaking for beginner students, the materials provide ways for the teacher to use real-world objects or 3-D figures along with various prompts such as "hold up a cylinder," "point to the figure on your paper," and "turn the cylinder so the circular base faces students."

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

- The Teacher Toolbox has a Multilingual Learners section that provides a list of the resources given throughout the materials as well as descriptions to guide teachers as they internalize lessons with the language tools. The resources listed are Proficiency Levels by Domain, Working on Words, Sentence Stems/Frames, Integrated Accessibility Features, Take-Home Letters, Tiered Supports, Language Connection, Virtual Manipulatives, Visual Glossary/Picture Vocabulary, Virtual Learning Videos, Skills Quiz, My Math Thoughts/Math Story, Problem-Based Task/Mathematical Modeling Task, Daily Numeracy, Data Science, Structured Conversation Routines, and Vocabulary Strategies.
- The "Explain" section in every unit provides Language Connections that support students in bilingual and ESL programs. For example, in Transformations, Explain, Language Connections, teacher directions begin with "1. Distribute a student handout at the appropriate proficiency levels for each student. 2. Use the prompts for listening, speaking, reading, and writing portions. Use gestures, pointing at objects, and visuals as appropriate. See prompts as appropriate." There are further prompts, sentence stems, and directions for modeling broken down into the different proficiency levels. Student handouts with teacher answer keys are provided in both English and Spanish at each proficiency level.

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

- The Multilingual Learners section of the Teacher Toolbox provides a Linguistic Diversity section that facilitates oral discourse, builds background knowledge, builds cross-linguistic connections, and shows embedded guidance on how to use each of the strategies to support emergent bilingual students. For example, under "Working on Words," the description states that the open-ended activity allows students to take accountability for their growing vocabulary while making relevant, personal connections to new terms. Furthermore, under "Integrated Accessibility Features," the description states that across the materials the

materials contain embedded tools that allow students to listen to text being read aloud, find the definition of words in the moment, make notes, and highlight words and phrases.

- The "Explain" section of each unit contains a page of resources for Language Connections for increasing language comprehension with emergent bilingual students. Handouts in English and Spanish are provided along with answer keys for these levels of language acquisition: beginner, intermediate, and advanced. The page includes a description, materials, preparation instructions, procedure and facilitation points, and detailed dialogue and questions for each leveled handout.
- Grade 8 materials provide various strategies for building vocabulary, comprehension, background knowledge, language proficiency, and spirals previously learned vocabulary and concepts to promote retention through oral and written discourse. For example, the Launch into Grade 8, Explain provides several vocabulary games such as "What's on my Back," "Graffiti Art," "Bingo," and "Drawing Game" that promote both oral and written discourse for emergent bilingual students.

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

- In the Teacher Toolbox, the Linguistic Diversity section provides opportunities to address metalinguistic transfer from English to Spanish. Resources include "Sentence Stems" in English and Spanish, "Working on Words" in English and Spanish, and "Proficiency Levels by Domain." This section also lists all of the ways the materials integrate research-based strategies and tools into the materials to support linguistically diverse learners. The list which includes Language Connections, Virtual Manipulatives, Visual Glossary/Picture Vocabulary, and Virtual Learning Videos also has a description of how each of the strategies support the student. For example, the description next to "My Math Thoughts/Math Story" reads "These literary elements give students the opportunity to practice reading and writing about math. Students can apply reading strategies to aid with comprehension and practice not just math vocabulary, but situation vocabulary as well."
- The "Explain" section of each unit contains Language Connections with Spanish language connections for beginner, intermediate, and advanced proficiency levels. The Language Connection states that "students have the opportunity to use their linguistic and cultural background knowledge to support connections to new skills, vocabulary and concepts." The side-by-side language connection gives opportunities to address metalinguistic transfer from English to Spanish. For example, in Angle Relationships, Explain, Language Connections, the materials show how to determine the angle measures for lines and shapes using steps in Spanish and images for transfer to English.
- The Implementation Guide in the Teacher Toolbox and the materials in each unit provide visuals and suggested linguistic scaffolds for teachers to meet the needs of multilingual learners at all proficiency levels. Resources, including Take-Home Letter, Anchor Charts, Math Stories, and Student Journal, are translated into Spanish and transadapted as appropriate. This allows dual language educators the tools for side-by-side comparison, cross-linguistic bridging, and linguistic analysis opportunities between English and Spanish.

Depth and Coherence of Key Concepts

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

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

Evidence includes, but is not limited to:

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

- The materials provide opportunities to identify concepts and solve real-world, relevant tasks and problem-solving situations that align with the TEKS, including concrete representations. For example, in the Volume, Elaborate, 3-D Print Shop activity, students are given data and figures for which they determine the plastic volume necessary to print 3-D figures. This interactive practice is a real-world, concrete representation that simulates actual 3-D printers and aligns with TEKS 8.7a.
- The materials include a variety of assessments that require students to demonstrate learning at a depth of understanding aligned with the TEKS. For example, the Equations and Inequalities, Explain, Show What You Know 1 assessment asks students to solve equations using modeling and algebraic steps in an open-ended space. The answers given show a depth of knowledge aligned with TEKS 8.8c.

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

- From Engage to Acceleration, materials demonstrate questions progressively increasing in rigor and complexity which leads to grade-level proficiency throughout the lesson. For example, in Proportional Relationships, increasing levels of Depth-of Knowledge (DOK) questions are provided for teachers throughout these activities and lessons.
- Tasks in materials increase in rigor and complexity as the learning scaffolds concrete understanding into representational and abstract thinking. For example, in Equations and Inequalities, students begin the unit by recalling what they know about equivalent expressions from grade 6 and grade 7. In the Explore, students solve equations and write inequalities. Then in the Elaborate and Evaluate, students practice solving and writing equations and

inequalities with variables on both sides using spiraled review concepts before demonstrating learning in the Standards-Based Assessment and Skills Quiz, which both include varying response types.

- In every unit, the materials provide DOK level 1–4 questions to increase rigor and complexity. Skills Quizzes and Math Chats include facilitation directions with level 1 recall questions focusing on facts, details, definitions, and procedures with one correct answer. Standards-Based Assessments, Show What You Know activities, and Interactive Practice include level 2 skill/concept questions where students apply skills and concepts by answering *how* and *why* questions with one correct answer. Explore activities and Anchor Charts provide level 3 strategic-thinking questions that require reasoning, planning, and defending conclusions and allow for multiple answers and approaches. Choice Boards and Mathematical Modeling Tasks contain level 4 extended-thinking questions that emphasize real-world applications and new situations with complex reasoning, planning, and multistep processes required. These questions are embedded throughout the lesson and found in the Teacher Guide in the "Home" section under Scope Overview in each unit. For example, Real Numbers, Acceleration, Would You Rather contains a level 4 prompt for students to "use mathematical reasoning and creativity to justify" their answer to the provided Would You Rather question.

Depth and Coherence of Key Concepts

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

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

Evidence includes, but is not limited to:

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

- The Course Rationale in the Teacher Toolbox shows coherence of knowledge and skills across the course through a logically sequenced Scope Order. For example, the grade 8 Course Rationale states that the order of the units is designed to "build on previous concepts, ensuring a coherent progression that enhances students' understanding and application of mathematical principles." The rationale then provides a table to both demonstrate the order of concepts and TEKS learned within the materials and that connecting TEKS are revisited and spiraled into new content.
- A Content Unwrapped in the Home section in each unit provides a vertical alignment chart that connects the progression of knowledge and skills across grade bands 5–8. For example, Volume, Content Unwrapped states that students progress from modeling relationships between rectangular and triangular pyramids and prisms in grade 7, to modeling relationships between cylinders, cones, and spheres in grade 8.

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

- The order of units in grade 8 materials demonstrates a coherent progression of patterns in mathematics. For example, the grade 8 Course Rationale in the Teacher Toolbox explains how the Surface Area unit expands on the Volume unit by applying new formulas to solve problems involving surface area.
- The materials provide explicit connection of big ideas in mathematics through the Content Support in the "Home" section in each unit. This section offers background knowledge of the big ideas, addresses misconceptions, and highlights important academic vocabulary that will help make proper connections. For example, Pairs of Linear Equations, Content Support shows how students make connections between number lines and the coordinate plane and then extend the idea in future units to linear relationships. The Content Unwrapped in the "Home" section of each unit provides evidence of coherence across units by connecting relationships between mathematical concepts. For example, Functions, Content Unwrapped states that students will connect the relationships between linear and nonlinear functions and represent the relationships between quantities using tables, graphs, and equations.

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

- The materials provide connections to previous grade levels in the Content Support in the "Home" section in each unit. For example, Functions, Content Support states that in previous grade levels, students plot points on a graph and identify independent and dependent quantities from tables and graphs. In the current grade level, students create a rule that assigns every input to exactly one output.
- The materials include conceptual, pictorial, and abstract representations supporting the content and language applicable to previous grade levels. For example, Volume, Explain, Picture Vocabulary shows images that scaffold from previous grade levels and include current grade-level vocabulary. The *height* picture card contains information learned in previous grades (rectangular prism) and continues with current grade-level learning (cone).
- The Content Support in the "Home" section of each unit connects content and language in the current grade level to future grade levels. For example, Real Numbers, Content Support provides vocabulary and TEKS from grade 5 through Algebra I, allowing teachers to aid students in creating learning connections with academic language.

Materials demonstrate coherence at the lesson level by connecting students' prior knowledge of concepts and procedures from the current and prior grade level(s) to new mathematical knowledge and skills.

- The Content Unwrapped in the "Home" section of each unit shows a coherent progression of concepts and procedures from prior grade levels to new mathematical knowledge and skills. For example, Real Numbers, Content Unwrapped contains background knowledge showing the connection of classification of numbers from previous grades and now comparing and ordering rational numbers. The background knowledge also connects procedures for operations with positive and negative exponents in grade 6 to now converting between scientific notation and standard decimal form.
- Materials have a coherent progression of concepts and procedures from the current grade level, from discovering and finding to solving. For example, the Volume unit contains a set of 3 Explore lessons. In Explore 1, students connect volumes of cylinders to models; in Explore 2, students connect volumes of cylinders to volumes of cones and solve problems involving both; and in Explore 3, students make connections between volumes of cylinders and cones to volumes of spheres and solve problems in a real-world context.

Depth and Coherence of Key Concepts

4.3	Spaced and Interleaved Practice	8/8
4.3a	Materials provide spaced retrieval opportunities with previously learned skills and concepts across lessons and units.	4/4
4.3b	Materials provide interleaved practice opportunities with previously learned skills and concepts across lessons and units.	4/4

The materials provide spaced retrieval opportunities with previously learned skills and concepts across lessons and units. Materials provide interleaved practice opportunities with previously learned skills and concepts across lessons and units.

Evidence includes, but is not limited to:

Materials provide spaced retrieval opportunities with previously learned skills and concepts across lessons and units.

- The materials use a 5E + AI model (Engage, Explore, Explain, Elaborate, Evaluate, Intervention, Acceleration) which intentionally spaces retrieval opportunities for skills and concepts throughout the lessons of a unit. Planned intervention allows for flexible retrieval opportunities during or between lessons. For example, the "Transformations, Intervention" tab provides a Quick Check, Review, Checkup, and Interactive Skill Review that include transformations and congruence which reinforce skills and concepts learned throughout the unit.
- The materials provide spaced retrieval for previously learned skills across units through Mathematical Fluency sessions throughout the course. For example, in Mathematical Fluency: Operations with Decimals, the "Adding, Tenths" activity gives students a chance to add decimals repeatedly while completing a triangle puzzle.
- The materials for grade 8 include Benchmark Assessments that provide opportunities for retrieval of previously learned concepts across units. This section includes assessments for the beginning, middle, and end of the course to allow students to retrieve prior learning while demonstrating recent learning.

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

- Lessons within grade 8 include concept and skills practice that require students to select and use diverse strategies, promoting the most efficient strategy rather than relying on a single strategy for every problem. For example, in the "Intervention, Armadillo Crossing" lesson of the Volume unit, students play interactive games to solve for both area and perimeter simultaneously with different geometric figures.
- Lessons in the materials include opportunities for students to select and use diverse strategies, promoting the most efficient strategy rather than relying on a single strategy for

every problem. For example, in Functions, students revisit and apply more than one way a function is represented using concepts and skills involving tables, coordinate points, graphs, equations, and inputs/outputs. The understanding of concepts and skills is reiterated with increasing complexity as students compare representations from previous lessons to determine if that representation is a function.

- The materials provide opportunities for frequent and short interleaved practice of concepts across units through Spiraled Review. For example, in Volume, the spiraled review states that "students will review concepts and material from previous math classes and units to help support their work in the current unit." This review engages students in practice with bivariate sets of data and data analysis with respect to scatterplots.

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

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

- The materials provide questions that require students to use various models and representations to interpret, analyze, and evaluate mathematical concepts and situations. For example, Grade 8, Equations and Inequalities, Explore instructs students to use algebra tiles and equations to answer questions involving interpreting, analyzing, and evaluating such as, "What strategies do you use to isolate the variable?" The activity also prompts students to draw models as well as to write and solve equations.
- Grade 8, Equations and Inequalities, Home, Content Support demonstrates how teachers guide students to solve equations and inequalities in various real-world situations by first using concrete models to represent the equations. Students must interpret the situation to create models and write equations and inequalities, evaluate the solutions to equations and inequalities, and analyze by comparing and contrasting equations and inequalities.
- Grade 8, Equations and Inequalities is divided into two categories for student exploration: solving equations and solving inequalities. Tasks assigned to students in these sections utilize algebra tiles and representations to interpret, analyze, and evaluate equations and inequalities.

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

- Questions require students to create various models to represent mathematical situations. For example, Grade 8, Functions, Explore includes a Student Journal that asks students to

create both a table and a set of ordered pairs from a data card to determine "Does the data represent a function?"

- "Grade 8, Equations and Inequalities, Explain, Show What You Know gives students the task of using algebra tiles to model scenarios. Students are instructed to use physical or virtual algebra tiles to model before solving algebraically.
- The Grade 8, Equations and Inequalities, Evaluate, Mathematical Modeling Task presents a mathematical situation involving music lessons. Students are required to "create and solve an equation that can be used to determine the number of lessons" that fit the situation using a base cost and a per-lesson fee.

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

- The materials include questions that prompt students to apply conceptual understanding to new situations and contexts. For example, Grade 8, Proportional Relationships, Explore 3 embeds the following guiding question that encourages students to apply understanding and justify explanations: "How does understanding the internal ratios of the corresponding sides of similar triangles help us understand the slope of a line?"
- The "Elaborate" and "Evaluate" sections of each unit include tasks with varied situations and contexts for students to apply conceptual understanding. For example, Grade 8, Equations and Inequalities, Elaborate contains Spiraled Review, which presents a movie awards ceremony to be organized, while Grade 8, Equations and Inequalities, Evaluate, Mathematical Modeling Task presents a scenario in which students take music lessons through a membership plan.

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

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

- Grade 8 materials include Daily Numeracy designed to build student automaticity needed for completing grade-level tasks. This daily practice, combined with Spiraled Review tasks, prompts students to recall content skills while building automaticity.
- Each unit contains student exercises that target specific skills and build fluency necessary to complete grade-level tasks. For example, Real Numbers, Elaborate provides two fluency builders. The "BAM!" tasks are designed to play with a partner and rehearse target skills in the unit. Also, Functions, Elaborate provides a fluency builder task which is a partner-based competition involving multiple questions on functions.
- Grade 8 materials provide three Mathematical Fluency sections (fractions, decimals, and integers) that offer students tasks to engage with fact fluency. The tasks reinforce strategies through discussions and visual models while allowing students to gain automaticity and fluency through games and everyday applications. Student and teacher tracking documents allow teachers to monitor and students to take ownership of their fluency.

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

- The materials include activities that require manipulatives for hands-on exploration of concepts which develops procedural skills and efficient mathematical procedures. For example, Real Numbers, Intervention, Interactive Skill Review allows students to play interactive games to practice math skills that include previous grade-level standards vertically aligning with the current grade-level unit. This also aids students in interleaved practice and applying procedures efficiently.
- Students are provided with opportunities to apply flexible mathematical procedures throughout a unit. For example, the Grade 8, Equations and Inequalities, Explore 1 allows students to choose between using algebra tiles, pictorial models, or equations to represent and solve given situations.
- Students practice accurate mathematical procedures within lessons. For example, Equations and Inequalities, Elaborate, Fluency Builder activities include "Fix the Mistake!" cards for partners to evaluate until one player has the most correct answers. This builds efficiency and accuracy as students repeat the learned processes of solving equations while identifying errors.

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

- Within lessons and throughout each unit, the materials provide strategic questions for teachers that prompt students to consider alternative strategies, think critically about efficient approaches, find alternate solutions, and apply procedures to different situations. For example, Functions, Explore, Explore 1 contains depth of knowledge leveled questions that evaluate procedures, processes, and solutions like "What makes a relationship a function?" and "Define a function in your own words."
- Within the lessons and throughout the units, Depth of Knowledge questions for teachers to prompt students to evaluate procedures, processes, and solutions for flexibility. For example, Grade 8, Equations and Inequalities, Explore 1 asks students to consider "Using algebra tiles is one way to model solving equations. What are other models that you could use?"
- Throughout the units, the materials incorporate digital tasks and activities that provide immediate feedback as students evaluate the efficiency and accuracy of their solutions in real-time. For example, Mathematical Fluency – Operations With Decimals, Adding, Hundredths-Assessment gives 25 fill-in-the-blank questions that show a colored dot when answered. A green dot indicates correct answers, while a red dot indicates incorrect answers. To provide flexibility, students may move forward and backward through the questions to check and recheck answers before completing the task.

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

- The materials provide support for teachers in understanding strategies that lead to increasingly efficient approaches. For example, Real Numbers, Home, Content Support provides a video, visual examples of strategies, and embedded professional development resources for teachers that focus on strategies for guiding students toward efficiency with real numbers.
- The Teacher Guide for each unit identifies questions for teachers to guide students toward efficient processes while assessing understanding. For example, Proportional Relationships, Scope Overview, Teacher Guide provides the questions, "How many points do you need to check to determine that the unit rates are the same from each table?" and "How can you determine if a slope is negative or positive?"
- Mathematical Fluency Operations with Integers is divided into tabs for adding, subtracting, multiplying, dividing, and all operations. Each of these offers embedded support for teachers to guide students toward increasingly efficient approaches. The "Student Mathematical Maze" instruction sheet notes that each problem has at least one possible solution and encourages students to compare solution pathways with classmates and "decide whether you have found the most efficient solution pathway."

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

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

- Each Content Unwrapped has "Implications for Instruction" that state how the conceptual emphasis of the TEKS are addressed. For example, Equations and Inequalities, Home, Content Unwrapped, Implications for Instruction according to TEKS 8.8c, suggests that students may have difficulty understanding the concept that completing inverse operations on both sides of the equation does not change the value of the equation.
- The scope and sequence provided in grade 8 materials maps out how each lesson, activity, or resource aligns with TEKS. The Content Unwrapped includes several sections that state how conceptual and procedural emphasis of the TEKS are addressed. For example, Surface Area, Home, Content Unwrapped uses Dissecting the Standard to outline the breakout skills, procedures for students, and academic vocabulary for TEKS 8.7b.

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

- Materials incorporate the use of concrete models, pictorial representations, and abstract representations to answer questions. For example, Equations and Inequalities, Explain, Show What You Know provides questions that call for using algebra tiles, drawing a model, and showing algebraic representations of solving equations and inequalities from situations.
- Tasks in grade 8 include hands-on activities with models or manipulatives that represent mathematical concepts. For example, Volume, Explore tasks ask students to progress through

using centimeter cubes, cylinder nets, and formulas to solve for measurements of cylinders as they work toward the abstract concept.

- Tasks and questions throughout grade 8 include the use of manipulatives, pictorial representations, and algebraic representations. For example, in Equations and Inequalities, Explore 1, both the Student Journal Task and Exit Ticket give a scenario and prompt students to find the solution in three ways: drawing a model of algebra tiles, showing algebraic steps for the equation, and explaining verbally how they solved the problem.

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

- Equations and Inequalities, Explore 1, Student Journal gives a scenario with a missing amount and prompts students to find the solution by creating a model with algebra tiles, showing algebraic steps for the equation, and explaining how the two are connected.
- The materials provide opportunities for students to articulate their emerging understanding of abstract mathematical concepts and procedures through creating models, explaining procedures, and practicing. For example, Surface Area, Explore 2 asks students to connect similarities between rectangular and triangular prisms, between total surface area and total area of a composite figure, and between creating a model and its formula.
- The Mathematical Modeling Task under "Evaluate" in each unit allows students to engage in tasks designed to help them connect, define, and explain concrete and representational models to abstract concepts. For example, Equations and Inequalities, Evaluate, Mathematical Modeling Task suggests asking students to "create and solve an equation that can be used to determine the number of lessons Max and Maya need to receive in order for them to pay the same amount." This helps students to define an equation that connects to the concrete number of lessons. Guidance is also given to "allow each group to share" with the class and "discuss how different groups tackled the challenge in different ways."

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

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

- The "Explain" section of each unit provides opportunities for students to develop academic language using visuals with Picture Vocabulary. For example, Distinguish Between Proportional and Non-Proportional, Explain, Picture Vocabulary includes a slideshow with visual representations and digitally manipulative flashcards that allow students to independently practice and develop mathematical language.
- The "Explain" section of each unit provides opportunities for students to develop mathematical language using visuals and manipulatives with Language Connections. Language Connections contains handouts for each language proficiency level which correlates to the unit vocabulary and context. For example, the Distinguish Between Proportional and Non-Proportional, Explain, Language Connections handout for beginners includes tables, graphs, and verbal descriptions corresponding to equations. Also included is a story with visuals for keywords in the scenario, and a word bank with mathematical vocabulary to complete a summary of processes.

- The materials include Language Supports that allow students to develop mathematical vocabulary by first creating a need for the language. This is accomplished through opportunities for reading and listening to new words in context. Students then apply those words in speaking and writing. For example, Pythagorean Theorem, Explore 1 encourages students to reiterate key terms such as triangle, area, square, square root, and hypotenuse during discussion and when writing in the student journal.

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

- The Language Connections in each unit guide teachers in scaffolding and supporting student development and use of academic vocabulary. For each language proficiency level, different prompts are given for teachers to use with students. For example, in the Distinguish Between Proportional and Non-Proportional, Explain, Language Connections section for students with beginner language proficiency, teachers are instructed to point to tables, point to a coordinate on the table that goes through the origin, and circle the origin coordinate in green. Teachers then "point to the equation for the table."
- The materials include descriptions of new mathematical vocabulary for a word wall to support student use of academic vocabulary in the Implementation Guide provided under Essentials in the Teacher Toolbox. There is more evidence of embedded teacher guidance as it points out that each Explore activity includes facilitation points for the teacher to attach academic vocabulary to the student's experiences during instruction. The guide further points out that the Explore activities include discussion prompts for teachers to guide students in communicating with academic language and embedded strategies to help emergent bilingual learners acquire new vocabulary.

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

- The Language Connections in each unit offer embedded guidance for the teacher to support mathematical conversations and provide opportunities for students to hear, refine, and use mathematical language with peers. Guidance is provided for students at beginner, intermediate, and advanced levels of listening, reading, speaking, and writing. For example, Pairs of Linear Equations, Explain, Language Connections gives multiple prompts for teachers to point and explain as students work to improve language with listening. To aid students in reading and speaking, there is also a list of several teacher prompts followed by the sentence stem students should utilize in response.
- The Content Support highlights the mathematical vocabulary and syntax developed within the unit and identifies academic vocabulary from prior units to support students in building their

math language toolkit. For example, Surface Area, Home, Content Unwrapped includes a list of vocabulary, both verbs and nouns with definitions, that students need to know to develop their mathematical language.

- The materials offer a set of discussion questions to facilitate discourse without limiting student responses, guiding students to exemplar responses to questions and tasks using developed mathematical language. For example, Equations and Inequalities, Explore 1 contains a Math Chat with prompts for teachers including, "How can you prove that a solution is correct for an equation?" This is followed by the exemplar response, "I can substitute my solution back into the original equation. If the solution makes the equation true, then it is correct."

Balance of Conceptual and Procedural Understanding

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

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

Evidence includes, but is not limited to:

Process standards are integrated appropriately into the materials.

- Process standards are included in all parts of the materials, including lessons, student practice, and assessments. This is evidenced through the Teacher Guide where the process standards are embedded in the lesson guides through all the activities. For example, in Surface Area, Scope Overview, Teacher Guide under the Explore 1 heading, the Standards of Mathematical Practice reads, "MP.1 Make sense of problems and persevere in solving them."
- The Grade 8: Scope and Sequence, found in the Curriculum Design section of the Teacher Toolbox, provides a template outlining the units in grade 8 and the standards, including process standards, that are integrated into each part of the materials. For example, the Surface Area unit in the guide shows that Explore 1 integrates TEKS 6.1ABCD, Explore 2 integrates TEKS 6.1ADF, and Explore 3 integrates TEKS 6.1ACF.

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

- The materials provide an overview and explanation of how the process standards are embedded throughout the course, including how the process standards connect to the content standards. For example, the "Process Standards" tab in the Teacher Toolbox shares how, in Grade 8, Functions students analyze relationships to communicate ideas. It states, "Students should analyze different representations including sets of ordered pairs, graphs, etc. Conversations take place with a partner...to define and identify functions."

- Teacher Toolbox, Essentials, Curriculum Design contains an Implementation Guide with a section on Standards Aligned. This section states that "the mathematical process standards are woven throughout our curriculum with the goal of building foundational skills that create effective thinkers in math." The process standards are listed in full along with a description of how they are incorporated and connected throughout the materials.
- Throughout the course, materials identify each process standard addressed as evidenced by the teacher directions, below "Description" and above "Materials," where each process standard embedded in the activity is listed. For example, in "Bivariate Data, Explore 1" the process standards relating to this activity are listed as 8.1A, 8.1C, and 8.1E.

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

- The Teacher Toolbox contains a "Process Standards" tab which includes the description and vertical alignment of how the standards are incorporated and connected throughout each lesson and unit. For example, under Grade 8, Surface Area and Volume the process standards 8.1G is identified along with a description of how students should communicate mathematics. Teacher guidance is given as, "Students will use key terms like *surface area*, *net*, *face*, and *vertex*, when discussing and solving surface area problems."
- The Content Support page of each unit, in addition to readiness and supporting standards, background knowledge, misconceptions, and terms to know, gives each process standard and a description of how students meet that process standard in the unit. For example, Proportional Relationships, Content Support, Applying Mathematical Process Standards lists the process standard 8.1B and follows with the description, "Students determine which representation (table, equation, graph) of proportionality solves the problem best. Students check their solutions on the various representations to make sure their answers make sense."

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

- The Explore lessons of each unit show the process standards incorporated at the beginning of the teacher directions. There is evidence of the use of these standards throughout the lesson in questions, activities, and assessments. For example, Surface Area, Explore 1 states the use of process standards 8.1ABCD.
- Grade 8 materials provide specific strategies, activities, and problems for integrating the process standards into the lessons. For example, Distinguish Between Proportional and Non-Proportional includes four quadrant coordinate planes, a virtual coordinate board, and tables to practice graphing for students to model linear relationships from given scenarios.
- The "Process Standards" tab in the Teacher Toolbox provides an overview with specific examples of how the process standards are incorporated and connected throughout each lesson. For example, in Process Standards – Analyze Relationships to Communicate Ideas, Grade 8, Pythagorean Theorem an incorporation description given is, "students explain in written form if three side lengths form a right triangle using the Pythagorean Theorem."

Productive Struggle

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

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

Evidence includes, but is not limited to:

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

- The materials identify high-leverage errors or misconceptions students may have and provide pre-planned teacher moves towards a solution. This allows students to think mathematically and persevere through solving problems as they find patterns to make sense of the mathematical operations. For example, Real Numbers, Home, Content Support points out that students may have difficulty understanding the relationship between sets and subsets of real numbers and may assume that a number with a radical symbol is an irrational number. The pre-planned teacher moves embedded in Real Numbers, Explore, Explore 3, Student Journal provides reflection questions for students to determine how a number line can help to order real numbers.
- The lessons in the materials challenge student thinking and problem-solving through real-world scenarios and various stimuli (tables, graphs, diagrams). For example, Equations and Inequalities, Explore 1 presents a scenario with two girls working jobs to save money for a trip. Students create and solve an equation relating to the scenario, and then observe and make sense of the forms of equations and how algebra tiles represent them. Four additional scenarios are provided for students to persevere and reflect.
- The materials provide encouragement for students to persevere in extending and applying the concepts learned to solve real-world problems. One example is the Pythagorean Theorem, Evaluate, Mathematical Modeling Task in which students determine the distance from the bottom of a ladder to the top of the building to rescue a kitten. To save the kitten, this problem-solving scenario, with its engaging real-world application, requires students to persevere, make sense of the math, and apply their understanding of the Pythagorean Theorem.

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

- Lessons and activities provide students with opportunities to practice and engage in multiple solution strategies to questions and tasks. For example, Launch into Grade 8, Acceleration, Choice Board poses a challenge for students to create four expressions that equal the number 30 using the numerals one through five and any operations, exponents, or parenthesis. Questions following the task allow students to develop an understanding that there is more than one method for completing mathematical tasks. Students explain how their strategy changed or stayed the same, as well as justify that all of their expressions are correct.
- The materials provide opportunities for students to explain and justify that there are multiple ways to solve problems. Equations and Inequalities, Evaluate, Mathematical Modeling Task divides students into small groups to determine how Max and Maria might end up paying the same amount for lessons when each pays different lesson fees and amounts for sheet music. When completed, teachers encourage students to discuss "how different groups tackled the challenge in different ways." Guiding questions are provided for teachers to support students' thinking as they explain and justify their answers to the problem.
- Lessons require students to explain or justify that there are multiple ways to solve a problem. For example, Equations and Inequalities, Explore 1 prompts students to both create and explain a model that demonstrates the solution to a given scenario as well as show the algebraic steps necessary to find the solution. Reflection questions ask, "What do you notice about the steps using algebra tiles and the steps solving the equation algebraically," to help students develop an understanding that both approaches lead to the same solution.

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

- The materials include tasks requiring students to make sense of mathematical concepts while doing math by actively engaging in hands-on activities. For example, Pythagorean Theorem, Explore 3 uses virtual and physical geoboards to model the Pythagorean Theorem. Peer groups of two or three students make sense of mathematics by doing math with geoboards and discussing how the grid is useful in creating similar right triangles. Then, students find distances between two points and write their solutions to present to the class and teacher.
- Active engagement through hands-on activities in the lessons requires students to make sense of mathematical concepts through writing. For example, Functions, Explore 1, Part II separates students into peer groups to analyze graphs and maps on "Monthly Deposit Cards" to determine whether or not they are functions. Students are then prompted to make sense of their work by writing explanations in their journals with peers before discussing the writing with the class and teacher.
- Lessons provide opportunities for classroom discourse where students make sense of mathematics by discussing different solution strategies, making connections, and engaging in collaborative learning with peers and their teacher. For example, Equations and Inequalities,

Explore 1 guides teachers to "ask students to share their strategies and encourage students to ask each other questions and make connections." Students do math with algebra tiles and represent these tiles in equations while discussing and collaborating with their peer groups. At the lesson's close, the class participates in a "Math Chat" to discuss their learning with the teacher.

Productive Struggle

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

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

Evidence includes, but is not limited to:

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

- Grade 8 materials include open-ended tasks and assessments, providing opportunities for students to share and reflect on their problem-solving approaches. For example, Functions, Evaluate, Mathematical Modeling Task gives small groups of students four different models to determine which ones represent a function. Instructions state that students should reflect on their journals for support and share thoughts within their small group. Students give explanations about which models are functions, argue how to change a model to make it a function, and reflect with justifications on their solution using both written and pictorial responses.
- Each unit contains questions to support teachers in guiding students to share explanations, arguments, and justifications. For example, Proportional Relationships, Explore 2 includes a "Math Chat" with guiding questions that ask students to explain how to "calculate the unit rate from a graph" and argue what "is the easiest method for filling in the table when given an equation." With each question, teachers prompt students to justify their answers.
- The materials provide guidance for teachers to support students in reflecting and sharing their problem-solving approaches. For example, Volume, Acceleration, Would You Rather encourages students to use mathematical reasoning and creativity to justify packing a picnic in a cylinder or cone-shaped basket. Students are asked to justify their answers with partners and include mathematical calculations.

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

- Each unit contains a Heat Map that allows students to analyze their assessment responses including those that occurred due to misconceptions. The "Procedure and Facilitation Tips" for the Heat Map assists teachers in providing explanatory feedback based on these student

responses while referring to the *Scaffolded Instruction Guide* for additional prompts, guidance, and resources. For example, Proportional Relationships, Evaluate, Heat Map guides teachers to "encourage students to look for patterns in their data...and use this information to reflect and set goals in the provided table." Teacher guidance is then given to consult with students to provide one-on-one or small-group explanatory feedback based on students' responses.

- The materials include information on anticipated misconceptions and prompts for how to address them through explanatory feedback. For example, Functions, Engage, Foundation Builder states the anticipated misconception that students may not understand the need to correctly identify both the independent and dependent variables before graphing the equation. Immediately following, the teacher prompt for explanatory feedback states "Pull out the two matching cards with equations. Show students that the equations are very similar, but the scenarios are not."
- The materials include information on anticipated misconceptions students may have in each unit. Teacher guidance and explanatory feedback prompts are found in each Explore lesson's Instructional Supports section. For example, Functions, Explore 2 includes guidance in the Instructional Supports, explaining that some students may misconstrue a function as simply a representation without repeating input values. When this occurs, teacher prompts are provided to emphasize that a function is any relationship in which each input has only one output.