Hand2mind, Inc.

Supplemental English Mathematics, 8
Hands-On Standards Mini–Lessons–Grade 8

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Supplemental	**9798899380341**	**Both Print and Digital**	**Static**

Rating Overview

TEKS SCORE	TEKS BREAKOUTS ATTEMPTED	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	82	0	Flags Not in Report	Not Applicable	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	18 out of 23	78%
2. Progress Monitoring	18 out of 20	90%
3. Supports for All Learners	36 out of 36	100%
4. Depth and Coherence of Key Concepts	14 out of 16	88%
5. Balance of Conceptual and Procedural Understanding	36 out of 38	95%
6. Productive Struggle	15 out of 21	71%

Breakdown by Suitability Noncompliance and Excellence Categories

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

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

IMRA Quality Report

1. Intentional Instructional Design

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

1.1 Course-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.1a	The materials do not include evidence of vertical alignment or a rationale explaining how content builds across grade levels.	4/5
1.1b	All criteria for guidance met.	3/3
1.1c	All criteria for guidance met.	2/2
1.1d	All criteria for guidance met.	2/2
1.1e	Materials did not include evidence of resources or guidance for instructional leaders to support educators.	0/2
—	**TOTAL**	11/14

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

The materials include an *Alignment Guide* that outlines the Texas Essential Knowledge and Skills (TEKS), English Language Proficiency Standards (ELPS), and concepts covered within the same grade level (horizontal alignment). This alignment is supported by an adjacent *Supplemental Guide* for each unit, which includes a scope and sequence, strand overview, and learning path, with sections dedicated to language development.

Each of the lessons within the materials contains individual narratives and activity opportunities that cover the designated TEKS and ELPS for each skill. Each of the activities also features scripted teacher supports that assist with horizontal alignment and are contained within the strand overview housed in the "Strand Summary" section.

The materials do not include rationales that examine how certain skills are prioritized at each grade level and how the progression of learning prepares students for future success (vertical alignment).

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

The "Implementation Guide" includes several usage recommendations, including language development supports, teacher-directed sections (e.g., Say and Ask), student practice and intervention opportunities, manipulative use, and extension activities.

The materials include guidance for usage in various instructional formats, evidenced by the teacher-facing guidance feature titled "A Walk Through a Lesson" for each of the five units.

Activities in each lesson include scripted guidance, along with sentence stems to support both teachers and students during instruction. Each of the lessons has a section to assist teachers with student misconceptions called "Look Out!" and formative assessments to help teachers quickly assess the level of instruction that students have mastered after each lesson.

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

The materials include a *TEKS Correlation Guide* with an assessment-based entry procedure and diagnostic features.

The materials include a diagnostic in the form of a ten-question assessment housed within the *Supplemental Guide*'s "Assessment and Project Tracking Sheets."

The "Progress Monitoring" section provides directions for facilitating the diagnostic assessment and offers suggestions for lessons that follow the assessment to enhance student understanding.

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

The materials include protocols with corresponding guidance for both unit and lesson internalization, evidenced by unit sections titled "A Walk Through a Lesson." These teacher and student pages contain scripting and internalization notes that help educators implement the activity to support student skill growth. It includes visual examples of the preparation and facilitation of the activity to support teachers in visualizing each activity.

Each of the strands includes an "Academic Mathematical Language" section and a "Unit Summary" section, providing educators with guidance on how to front-load critical academic and content-specific vocabulary and predict student misconceptions.

The materials include consistent structuring components that provide each lesson with predictable steps for lesson internalization, including Objective, Materials, EL Support, "Try It!," "Talk About It," "Solve It," "More Ideas," "Look Out!," "Formative Assessment," and student work pages.

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

The materials do not include evidence of resources or guidance for instructional leaders to support educators.

1.2 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	All criteria for guidance met.	7/7
1.2b	This guidance is not applicable to the program.	N/A
1.2c	The materials do not include explicit evidence of family support or suggestions for supporting student progress present in the materials.	0/2
—	**TOTAL**	7/9

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

The materials are designed to be static, and each lesson plan contains a lesson objective aligned to the corresponding TEKS and ELPS, a detailed outline of lesson content, a complete materials list, suggested time durations, and formative assessment opportunities.

Each lesson is well-arranged in a consistent, user-friendly design for visible access, culminating in a single-problem formative assessment and reinforced by extensive student practice opportunities within the student work pages.

Each unit has Assessments, Progress Tracking Sheets, and Answer Keys. "Student Lesson Tracking Progress Reports" are available for each lesson and are detailed individually. These reports are provided in both English and Spanish, and they also include answer keys for teacher use. Teachers can score Diagnostic Assessments to determine if the student has shown grade-level mastery of the concept using the "Assessment Student Progress Report."

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

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

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

The materials do not include explicit evidence of family support or suggestions for supporting student progress.

While the "Implementation Guide" states, "Students can track their progress toward mastery of each lesson concept," and the materials include academic mathematical language that could be used to

support students' progress at home, the materials are not explicitly designed to provide such support for families.

2. Progress Monitoring

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

2.1 Instructional Assessments

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.1a	All criteria for guidance met.	2/2
2.1b	All criteria for guidance met.	2/2
2.1c	This is a static program that includes print assessments. Assessments are not designed to be digital assessments that include printable versions and accommodations, including text-to-speech, content and language supports, and calculators, that educators can enable or disable to support individual students.	Not Scored
2.1d	All criteria for guidance met.	4/4
2.1e	All criteria for guidance met.	4/4
—	**TOTAL**	12/12

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

The materials provide a definition and the intended purpose of diagnostic assessments. The definition and intended purpose of the summative assessment are provided in the *Supplemental Guide*, which includes a paragraph describing the purpose, administering the assessments, and tracking progress. Materials provide information to evaluate students' prior knowledge, and teachers use an "Assessment Student Progress Report" to determine whether the student has demonstrated grade-level mastery of the concept.

The "Depth and Coherence of Key Mathematical Concepts" section defines the types of instructional assessments and their intended purposes. For each item missed, the section recommends a lesson to strengthen the student's understanding.

The materials provide formative assessments consistently within each lesson, allowing for ongoing feedback on students' understanding of the concept. Each lesson includes an explanation of the purpose of the formative assessments.

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

The materials include guidance to ensure consistent, but not accurate, administration of assessments.

The materials provide general guidance but lack explicit instructions for administering assessments.

The materials do not include time limits, guidance for each component of the assessment, data desegregation instructions, or administrator scripts.

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

The materials do not include digital modalities or interfaces for assessments; however, they do provide printable versions of formative assessments.

The materials show no evidence of text-to-speech, content, language supports, or calculators for student use.

The materials are not designed for student-facing digital use. While housed in a digital platform for educators, assessments are provided only in print and do not include digital accommodations.

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

The diagnostic assessment includes two question tiers that vary in complexity from basic recall to skills application. For example, the diagnostic assessment for the "Statistics and Probability" strand requires students to calculate the probability of an event and use their knowledge of probability and data to determine which group of data has the greatest variability.

The diagnostic assessment includes multi-select questions, such as paper-based interactive sample items, where students select two or more answers.

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

The materials include a variety of formative assessments with TEKS-aligned tasks or questions. The "Progress Monitoring" section within the *Supplement Guide*'s "Implementation Guide" explains that formative assessments are embedded throughout the lessons. These occur in activities such as "Try It!," "Talk About It," "Formative Assessment," and "More Ideas." The complexity of these items varies, ranging from hands-on problem-solving with manipulatives to algebraic reasoning, and some require students to interpret or analyze the problem.

The formative assessments include interactive item types such as simulated drawing tools, drag-and-drop, drop-down text selection, and text response, reflecting TEA-released paper-based interactive items.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	The materials do not include rationales for correct or incorrect responses on instructional assessments.	1/3
2.2b	All criteria for guidance met.	1/1
2.2c	All criteria for guidance met.	2/2
2.2d	All criteria for guidance met.	2/2
2.2e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	6/8

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

The materials do not provide guidance for interpreting student performance, and they also lack a rationale for student responses, thereby limiting educators' ability to understand student thinking.

While materials provide answer keys for assessments, they do not offer rationales for correct or incorrect responses.

The materials do not provide guidance for educators to intervene with identified students. Instead, they include information for educators to work one-on-one with the student using manipulatives to explain the concept, but lack rationales for their approach.

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

The materials provide guidance for using the included tasks and activities, targeting skills as determined by assessment data. The "Assessment Student Progress Report" includes an aligned lesson to provide support for each question on the assessment. Each question number listed in the table has a corresponding lesson number for that unit that the teacher can reference to re-teach as needed.

The diagnostic assessment provides educators with guidance recommending next steps following assessment completion: "For each item missed, a lesson is recommended to strengthen the student's understanding. If the progress measure is still not met upon completion of the lesson, the 'Look Out!' can be used as an indicator for potential misconceptions that may need to be addressed before the next progress measure."

The summative assessment provides educators with guidance recommending next steps following assessment completion: "If a student correctly answers the Exercise portion but does not meet the

Standards-Based Math Practice, he or she will need some additional practice translating the concrete and pictorial representations to an abstract representation."

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

The materials include progress- and growth-tracking tools for both educators and students. The "Assessment Progress Report" is designed for educators to record assessment results for each student in each unit. Each unit assessment consists of ten questions. The citation provides a table for educators to identify the question number, lesson number, skill description, and a field to indicate whether the student met the objective on the assessment.

The "Student Lesson Tracking Progress Report" is designed to help students track their progress and understanding throughout the lesson. The report lists concepts and skills for students to self-monitor their progress by entering a checkmark to indicate understanding or an "x" for a question or skill requiring further attention or reteaching.

The materials provide tables within the *Supplemental Guide* for each unit, with columns for three different progress-monitoring dates throughout the year. The first column is designed to be a diagnostic assessment, the second column is intended for formative assessments during the lesson block, and the third column is intended for a summative assessment at the culmination of an instructional block.

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

The materials provide prompts and guidance questions to support educators in checking for understanding throughout the activity. The materials also include a "Look Out!" section within each lesson to help educators anticipate and address common student errors and misconceptions.

The "Talk About It" section within each lesson offers prompts for educators to *say, ask,* or *discuss*, which provides scripted support in facilitating meaningful conversations and ensuring student understanding.

The materials include prompts within the margins to remind educators to pause and pose questions throughout the learning cycle.

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

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

3. Supports for All Learners

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

3.1 Differentiation and Scaffolds

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.1a	All criteria for guidance met.	1/1
3.1b	All criteria for guidance met.	4/4
3.1c	All criteria for guidance met.	2/2
3.1d	Digital materials do not include accommodations, including text-to-speech, content and language supports, and calculators that educators can enable or disable to support individual students.	Not Scored
3.1e	All criteria for guidance met.	2/2
—	**TOTAL**	9/9

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

The introductory pages of the materials guide educators through each element of the lessons in the "Walk Through a Lesson" section. The materials guide educators through each specific area of the lesson, encouraging educators to efficiently and effectively utilize the resource.

The materials include a diagnostic tracking sheet that guides the educator to a corresponding lesson for each question or skill if students answer the question incorrectly. For example, on the Unit 3 assessment, if the student misses questions 6 or 7, the table directs the teacher back to Lesson 4.

Each lesson features questions in the Ask part of the " Talk About It" section that serve to activate prior knowledge and aid student thinking with sentence stems. The activity also includes visual aids and manipulatives to aid student comprehension.

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

The *Supplemental Guide* contains lists of vocabulary words titled "Academic Mathematical Language" for each unit. Following this is a section entitled "Language Development/Supports," which lists supports specific to that particular unit. For example, within the *Supplemental Guide,* under the "Overview for Functions" strand, the guidance instructs educators to: "Remind students that order in ordered pairs matters. Review with students which number goes along the x-axis and which number goes along the y-axis."

The "Language Development/Supports" section within the "Strand Overview" provides educators with guidance on how to provide support for students with unfamiliar vocabulary. Each of the product's lessons includes several sentence stems and questions that aid in student comprehension as they discuss the activity with both the teacher and their peers.

The materials include an embedded "EL Support" section within each lesson designed to assist emergent bilingual (EB) students. This portion of the activity provides various scaffolds and strategies educators can use to help students fully grasp the targeted standard or skill before moving forward. For example, vocabulary support helps students link what they already know to the new concept being taught.

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

The materials include explicit educator guidance for enrichment and extension activities for students who have demonstrated proficiency in grade-level content.

The materials include educator guidance for enrichment and extension opportunities at grade level and feature sidebar notes outlining specific suggestions for enrichment and extension tasks that encourage deeper exploration of concepts and skills. For example, the "More Ideas" activities within each lesson might be used as lesson extensions. The "More Ideas" activities offer enrichment opportunities designed to deepen students' understanding of the topic and its connection to the targeted skill. These activities include a variety of tasks, such as creating graphs, reenacting scenarios, working with a partner, or responding to questions that relate the lesson to real-world contexts. In some cases, this section also directs students to additional practice in their workbook, including specific page references.

The materials provide guidance to educators on assisting students through activities that utilize question stems, comments, and student pairing ideas. For example, in "Apply Properties of Integer Exponents," the "More Ideas" section suggests that educators have students "make tables of values with exponents of numbers to help them see why zero exponents should be equal to one and negative exponents are reciprocals." Additionally, the "Black-Line Master" page for student practice includes a problem for every lesson under "Challenge!" for students who have demonstrated proficiency in grade-level skills related to each lesson.

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

The product does not include digital materials with accommodations, such as text-to-speech, calculators, content, language supports, etc.

The materials are not available in a student-facing digital format and therefore do not offer built-in accommodations for diverse student needs. They consist of printable lesson plans and "Black-Line Masters" intended for student use.

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

The materials include educator guidance on offering supports for students to demonstrate understanding of mathematical concepts in various ways. For example, in "Expressions and Equations," the materials guide educators to prompt students to determine the number of solutions by learning to analyze a solution of the form $x = a$, $a = a$, or $a = b$, where a and b are different numbers.

The "More Ideas" section of the lesson offers options for various ways students can demonstrate their understanding of the concept. For example, in "Transformations," students use centimeter grid paper to model transformations, use XY coordinate pegboards, or complete practice questions to model understanding of transformations.

3.2 Instructional Methods

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

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

The materials include direct prompts and guidance for educators to build knowledge and advice for communicating big ideas under bolded text directives, including Say and Ask, such as, "What is the length of your cube? The width? The height? What is the volume? How could you write an equation to demonstrate the meaning of a cube root?" The materials provide specific prompts and guidance to help students understand concepts, connect key ideas, and access prior knowledge. In "Identify the Line of Best Fit," the materials remind educators that students have previously learned how to graph a scatter plot diagram. Students solve a problem where they determine the line of best fit by using a pegboard, pegs, and a ruler. Then they write an equation for a line. The "Talk About It" section prompts teachers to ask students, "Does the line show the general direction of the data? Are there approximately an equal number of pegs (points) above the line as below? What is the slope of the line? What does it mean? What is the y-intercept? What does it mean?" Through this questioning, students focus on the key concepts of data representation, trend analysis, slope as a rate of change, and the interpretation of the y-intercept.

The materials guide educators to activate prior knowledge by reviewing vocabulary previously taught in prior lessons. In "Cube Roots," students review the following vocabulary words: *cube roots, volume, edge, length, height,* and *width*. Each of the five big ideas, titled "Strand Overviews," is complete with a section titled "Language Development/Supports," providing specific guidance for educators. This guidance includes direct prompts and guidance stems that enable educators to build knowledge by highlighting and connecting key patterns, relationships, and features through multiple means of representation.

The materials utilize the connection of key relationships through multiple means of representation. For example, in a "Unit Rates" lesson, students solve a problem involving unit rates. Students work with pattern blocks to represent the situation and then draw the groups they create and write their numbers as ratios and fractions. After the lesson, in the "Talk About It" section, educators are prompted to ask students about different unit rate situations and what they have in common, anchoring the big idea of

using unit rates across multiple situations. In the "More Ideas" section, students work with snap cubes to represent the number of passengers in train cars, and are then guided to see the ratio of passengers to vehicles. These examples help illustrate the multiple representations of unit rates, percentages, and equivalent ratios, enabling students to connect key concepts. In the "Try It!" activity of each lesson, the materials utilize the connection of key relationships through multiple means of representation. In "Fractional Number Sense," students construct a number line to help them estimate portions of a shelf to fill. In this activity, they connect their knowledge of rational numbers, fractions, and whole numbers to help them estimate. At the end of the activity, they compare their model to the actual amount.

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

The materials include embedded guidance and provide educators with prompts to facilitate effective lesson delivery using various instructional approaches, including opportunities for student discourse and hands-on exploration via strategically utilized math manipulatives. The materials include directions for utilizing eight different manipulatives: Algebra Tiles, AngLegs, Centimeter Cubes, Color Tiles, Folding Number Lines, Pattern Blocks, Relational GeoSolids, and XY Coordinate Pegboards.

In "Draw Inference from Data," students experience various instructional approaches. This lesson employs visual and hands-on approaches, providing opportunities for collaboration with peers to help students draw inferences from data. Students use Centimeter Cubes to build dot plots, then use the plots to answer questions about the data. Students explain their thinking. In the "More Ideas" section, students work in pairs to discuss which measures best represent the data and make predictions based on the data distribution. Real-world scenarios help students apply key concepts and reasoning in meaningful contexts. With teacher-led guidance, hands-on manipulatives, and independent practice, students engage in multiple instructional strategies that support diverse learning styles, culminating in a formative assessment.

In "Solve Addition Problems with Integers," the materials guide educators on how to utilize hands-on manipulatives, visual models, and real-world contexts to help students understand integer addition. Students work with Algebra Tiles to model positive and negative integers, forming zero pairs to find the sum. They also use a number line to represent movement to the left and right of zero visually, further reinforcing the concept. Students partner with another student in the "More Ideas" section to create a word problem using integers, then solve the problem using Algebra Tiles. The lesson connects everyday scenarios to abstract concepts, preparing students for future algebraic thinking.

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

The materials include multi-tiered intervention methods for various types of practice and structures, ranging from universal support for all (Tier 1) to targeted interventions for some (Tier 2), and intensive

supports for students requiring individualized help (Tier 3). The material elements "A Walk Through a Lesson" and "Black-Line Masters" provide a grouping guide, recommending whether students should work independently, in pairs, or in small groups.

The materials incorporate multiple learning cycle elements within each lesson, serving as a consistent framework throughout the product. The "Try It!" and "Talk About It" sections can be used as guided practice where educators ask students scaffolded questions and guide students through the problem-solving process. Students can complete independent practice in the "Solve It" and "Formative Assessment" sections. Many lessons ask students to work in pairs and use manipulatives in collaborative practice. The corresponding student practice pages could be assigned to students as independent work, partner work, or group collaboration. EB supports are embedded in each lesson and can scaffold for language learners. The "More Ideas" section provides follow-up or enrichment activities that could serve as Tier 2 or Tier 3 interventions. However, this option is not explicitly stated, and educators may need to infer its use.

The materials include educator guidance to support the effective implementation of multi-tiered intervention methods. There is ample assistance available to help educators understand how to facilitate lessons, including questions to ask, strategies to utilize, student grouping techniques to implement, and misconceptions to identify.

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

The materials include enrichment and extension methods, as well as implementation guidance, in all lessons across the product. In the "More Ideas" section of each lesson, the materials provide educators with multiple alternative methods to teach students about concepts addressed in the lesson. The materials provide educators with sufficient guidance to implement enrichment and extension examples throughout the product. For example, in "Convert Repeating Decimals to Fractions," students work in pairs to play games where one student creates repeating decimals and the other student uses a folding number line to write the decimals as fractions. Then they switch and repeat. The "More Ideas" section can also be utilized for enrichment or extension.

Several examples demonstrate how the materials incorporate enrichment and extension methods to support various forms of engagement, including guidance on implementing these strategies effectively. For instance, in "Squares and Square Roots," students use Centimeter Cubes to make square arrays and record their observations in a table. Then, pairs work with other pairs to combine their cubes to make squares for larger numbers and record their side lengths and square roots. In "Relate Scope to Linear Equations," students use masking tape to make a coordinate grid on the floor. Then, students stand in the locations of the points in the problem and use a string to graph the lines. Students create similar triangles using a string to demonstrate the slopes of the lines and find the equations for the lines. All of

these examples illustrate the various forms of enrichment and extension methods that increase student engagement.

The "Challenge!" practice, located within each of the product's "Student Pages," is an extended response exercise featuring an open-ended, constructed response question to help educators gauge student mastery of content. Additionally, each lesson includes a section labeled "EL Support" that provides guidance on ways educators can provide English language support in lessons.

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

The materials include prompts and guidance to support educators in providing timely feedback during lesson delivery. In "Estimate Square Roots," the materials guide educators in the "Try It!" section on what to say and ask, as well as the answer that should be elicited from students. For example, the guidance prompts educators to ask: "Between which squares does 55 fall?" The materials prompt educators to elicit from students that it falls between 7 and 8. The guidance instructs the teacher to ask students if they think the square root is greater than or less than 7.5. Educators tell students that the square root of 55 is less than 7.5 because 49 is closer to 55 than 64. In the "Talk About It" section, the materials provide four more prompts to ask students questions, what answers to elicit from them, and how to respond. Multiple opportunities are given to assist educators with prompts and guidance.

In "Relate Slopes to Linear Equations," the materials guide educators through Parts 1 and 2 of the "Try It!" activity, instructing them to ask students multiple questions and provide guidance for their responses. In Part 3, the guidance prompts: "Have students stretch a rubber band around the pegs for each girl. Elicit that for each girl, the pegs lie on a line. Ask: Does either line represent a proportional relationship? Which one? Say: Find the unit rate and write an equation for y versus x." These prompts are helpful for educators to know what to say and ask to further assist students in making connections.

3.3 Support for Emergent Bilingual Students

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

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.3a	All criteria for guidance met.	4/4
3.3b	This guidance is not applicable to the program.	N/A
3.3c	The materials do not include educator guidance on providing and incorporating linguistic accommodations for all levels of language proficiency.	1/1
3.3d	All criteria for guidance met.	8/8
3.3e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	13/13

3.3a – If designed to be static, materials include educator guidance on providing and incorporating linguistic accommodations for all levels of language proficiency [as defined by the English Language Proficiency Standards (ELPS)], which are designed to engage students in using increasingly more academic language.

The materials include implementation guidance to support educators in providing linguistic accommodations for all levels of language proficiency.

The student lesson material and the *Supplemental Guide* include EB support and guidance on incorporating multiple levels of language support to help students build academic language, including sentence stems, graphic organizers, and word banks. Supports are aligned to the ELPS proficiency levels to promote access and participation in mathematical discourse.

The materials include appropriate pre-production, beginning, intermediate, high-intermediate, and advanced EB supports.

3.3b – If designed to be adaptive, materials include embedded linguistic accommodations for all levels of language proficiency [as defined by the English Language Proficiency Standards (ELPS)], which are designed to engage students in using increasingly more academic language.

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

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

All lessons within the materials include a general "EL Support" section with teacher guidance on utilization of word banks, sentence stems, and other strategies.

The "Strand Overviews" within the *Supplement Guide* provide language development and support specific to each of the five strands, along with a description of how the ELPS are integrated into each lesson.

The materials do not include educator guidance on providing and incorporating linguistic accommodations for all levels of language proficiency.

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

The "Language Development/Supports" section within the *Supplement Guide* facilitates cross-linguistic connections and builds background knowledge to support oral discourse for language development. For example, in the "Number System Language Development/Supports," the guidance states, "point out to students that the root of the word quadrant, quad, represents 4, as a useful way for students to remember there are 4 quadrants on the xy-coordinate plane," supporting the development of academic vocabulary and cross-linguistic connections. Another example states, "compare the mathematical and everyday meaning of the word inequality. Students may think of inequality as describing a situation where people are treated unfairly. Ask how this meaning of the word relates to the mathematical meaning."

The materials include embedded guidance to support EB students through written discourse, including opportunities for students to write explanations for solving problems and constructing word problems.

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

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

4. Depth and Coherence of Key Concepts

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

4.1 Depth of Key Concepts

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

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

The materials include practice opportunities on the student pages, requiring students to demonstrate their understanding of TEKS-aligned concepts. The formative assessment included in the learning pathway requires students to demonstrate depth of understanding aligned to the TEKS.

The materials introduce concepts using both concrete and representational models. For example, in "Frequency," students work with data from a poll and construct two-way frequency and relative frequency tables to summarize categorical data. Students use color tiles to represent their data and are then asked to interpret their graphs. Checks for understanding are embedded by encouraging students to consider and demonstrate alternative models and how they could change the frequencies to derive alternative solutions for the two types of frequency tables.

Students demonstrate their depth of understanding through adequate opportunities for instructional assessments. For example, in an instructional assessment within the "Functions" strand, students address multiple questions to demonstrate their knowledge of functions. Given a function in tabular and graphical form, students write it, evaluate relationships, and interpret data. The formative assessment included in the learning pathway requires students to demonstrate depth of understanding aligned to the TEKS.

Each lesson features authentic discussion opportunities within the "Talk About It" section, referencing skills previously taught and encouraging connections to prior learning. Each activity also includes an "EL Support" section to support EBs. In this section, several scaffolds and supports are provided for teachers to incorporate into their lessons, ensuring students have mastered the skill before progressing. These supports include academic vocabulary learned in previous grade levels and serve to provide scaffolding for new knowledge.

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

The materials increase in rigor and complexity throughout each lesson's consistent learning cycle, beginning with the problem-based introduction titled "Try It!," continuing with a discussion opportunity in "Talk About It," followed by opportunities to practice proficiency in the "Solve It" section, and extending learning in "More Ideas."

The materials include questions and tasks that build in complexity. For example, in a Pythagorean relationships lesson, students build a strong understanding of the Pythagorean theorem by exploring it through models and diagrams. They apply the theorem to solve mathematical problems and extend their learning by using it to address real-life situations. After previously plotting data points on a coordinate plane, students identify the line of best fit and use their mathematical understanding of lines to explain and evaluate given data.

The materials increase in rigor and complexity, leading to proficiency at the grade level and above. For example, after previously plotting data points on a coordinate plane in a lesson within the "Statistics and Probability" strand, students identify the line of best fit and use their mathematical understanding of lines to explain and evaluate given data.

4.2 Coherence of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.2a	All criteria for guidance met.	1/1
4.2b	All criteria for guidance met.	1/1
4.2c	The materials demonstrate coherence within the grade level, but do not connect students current knowledge and skills to future grade levels.	2/4
—	**TOTAL**	4/6

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

The materials include horizontal coherence across concepts. For example, the "Geometry" unit shows horizontal alignment by having students build on their knowledge of geometric concepts. Students find the area of basic shapes, decompose complex polygons, and then apply those skills to trapezoids and the volume of prisms using fractional edge lengths. They also explore shapes on the coordinate plane and connect two-dimensional figures to three-dimensional solids, which aims to reinforce and extend their understanding of geometry.

The "Ratio and Proportions" unit demonstrates evidence of coherence across concepts horizontally. The materials begin with students learning how to write and represent ratios, then move on to unit rates and solving proportional problems. As students progress through the unit, they use models and tables, eventually connecting ratios to fractions and percents. The lessons build on one another to help students develop a strong foundation in proportional reasoning.

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

The materials demonstrate coherence vertically across concepts and grade bands. For example, in Grade 6's "Ratios and Proportions" unit, Lesson 3 introduces students to describing unit rates within ratio relationships. By Lesson 5, students progress to determining ratios and applying them to solve problems. Building on this foundation, grade 7's "Ratios and Proportions" unit deepens conceptual understanding by having students identify the constant of proportionality and use it to graph and write equations representing proportional relationships in Lessons 4 and 5. This alignment supports the progressive development of skills, enabling students to first grasp key concepts and then apply them to real-world contexts.

The vertical alignment of the grades 6 and 7 materials is demonstrated in the "Expressions and Equations" units of each product, illustrating an alignment in algebraic thinking. In grade 6, students build foundational skills by exploring variables, algebraic expressions, and solving one-step equations and

inequalities in real-world contexts. Grade 7 builds on these concepts, with students expanding and simplifying expressions and solving more complex linear equations and inequalities, thereby increasing their understanding and application of algebraic reasoning.

The EL support section of each mini-lesson demonstrates vertical coherence through guidance for the educator to review prior vocabulary (e.g., *data, statistical question, survey, interval, analysis, mean, median, quartile, deviation*) learned with students before starting the lesson.

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

The materials demonstrate coherence across lessons or activities by connecting students' prior knowledge within the grade level, but do not connect students' current knowledge to future grade levels.

The materials show coherence across lessons or activities within the current grade level by building on students' prior mathematical knowledge of real-world comparisons and connecting students' prior knowledge of geometric figures, symmetry, and the coordinate plane. Students further their understanding of transformations, including reflections, rotations, dilations, similarity, and congruence. They also expand their knowledge of geometry by studying the triangle sum theorem, angles formed by parallel lines, the Pythagorean theorem, and volume formulas for cones, cylinders, and spheres. Hands-on activities and concrete models help students connect prior learning to new concepts.

The materials do not demonstrate coherence extending to future grade levels. No prompts or guidance ask students to consider how their current understanding of concepts connects to future learning. The lessons are based solely on current grade-level material. For example, in a lesson on converting repeating decimals to fractions, students consider a problem requiring them to convert repeating decimal numbers into their fraction equivalents. After solving the problem using a folder number line, the materials direct the educator to ask students low-level questions such as "Are you able to see the patterns that allow you to determine the fraction form?" "What do you notice?" and "What is the pattern?" Students cannot connect their current understanding to future grade-level concepts.

4.3 Coherence and Variety of Practice

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

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

The materials provide spaced retrieval opportunities within the "Strand Overview," enabling educators to reference prior learning and capitalize on spiraling learning opportunities.

The materials are structured to enable educators to utilize lessons independently of previous content. However, the "Strand Overview" table includes a column that compares what students have previously learned with content identified as new to the grade level.

The "Try It!" and "Formative Assessment" sections in each lesson could be extended to include skills previously covered. The "Talk About It" section integrates prior learning through questions designed to connect current knowledge with future learning.

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

The materials provide interleaved practice opportunities, complete with practice sets of mixed skills, as part of a review at the culmination of each strand. Items from each lesson are mixed within this review to prompt students' discernment of the concepts addressed and the best approaches.

The materials enable students to explore various levels or approaches within the same general concept, and the lessons integrate practice across different skills or concepts in a mixed format. Additionally, educators are encouraged to revisit the "More Ideas" section of previous lessons and bring tasks and problems forward for students to practice again during subsequent lessons.

The *Supplemental Guide* states, "Interleaved Practice—More Ideas provides additional activities that can be interleaved throughout the strand to allow students to discern what mathematical concept is being addressed." Each skill within the "Strand Overview" includes a column with review item numbers.

5. Balance of Conceptual and Procedural Understanding

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

5.1 Development of Conceptual Understanding

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

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

The materials include guiding questions that prompt students to think critically about the concepts and skills being explored. These questions are standards-aligned and serve as valuable checkpoints for educators to identify areas where students may need additional support. Embedded real-world examples throughout the activities further encourage application and analysis, helping students make meaningful connections beyond the classroom. The "More Ideas" section of the resource provides a range of enrichment activities that encourage students to interpret, analyze, and evaluate their results through multiple perspectives. These tasks extend learning by promoting deeper understanding and flexible thinking. Real-world settings include contexts such as students comparing the relative sizes of bacteria and viruses in scientific notation and interpreting the slope of the line of best fit using a linear equation.

The materials provide questions and tasks that allow students to analyze mathematical concepts. For example, in "Describe a Relationship Using a Linear Equation," students consider that each column of the table represents an ordered pair. Students answer the question, "How would you describe the trend shown in the data?" This question is an example of asking students to analyze and requires them to examine patterns or relationships in the data, rather than just observing or performing calculations with the given real-world data.

The materials provide questions and tasks that allow students to interpret mathematical concepts. For example, in "Perform Operations Using Scientific Notation," the "Try It!" activity asks students to solve a problem involving the erosion of the granite on Mount Rushmore. In the "Talk About It" section, students learn that the height of each head on Mount Rushmore is 60 feet. Students must consider "How long would it take for 60 feet to erode?" Students explain how they arrived at their conclusion.

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

The materials include questions and tasks that provide opportunities for students to create models and representations of mathematical situations by concrete means. The materials frequently utilize

manipulatives, such as Algebra Tiles, two-color counters, snap cubes, pegboards, and other tactile aids, to help students make connections between concrete models and abstract concepts.

In "Cube Roots," students work with centimeter cubes to model a shed that is measured in cubic meters. Students find the volume and edge lengths of a 27 cubic meter shed when using all 27 centimeter cubes. The activity bridges physical manipulation and abstract reasoning, allowing students to use concrete objects to discover that the edge length is the cube root of the volume, rather than only working with numbers and symbols at an abstract level.

In the "Challenge!" section at the end of each extension activity, the student pages pose problems that require students to engage in higher-order thinking regarding math processes and procedures. Each question has either a real-world application or a problem that requires a written response.

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

The materials include questions and tasks that provide opportunities for students to apply conceptual understanding to new problems and contexts. For example, in "Find the Distance Between Two Points," educators are reminded that "students have applied the Pythagorean theorem to find missing side lengths in right triangles and to evaluate whether sets of side lengths make a right triangle." In this lesson, students apply that knowledge in a real-world situation, such as walking down city streets to specific locations. Students apply the Pythagorean theorem to find the distance between points in a coordinate plane. This task displays students transferring their understanding of a math concept to a new problem or context.

In "Identify the Line of Best Fit," the "Try It!" activity allows students to grasp the concept of creating a line of best fit with a ruler and apply that knowledge to other practice problems.

In "Find the Volume of Cones, Cylinders, and Spheres," teachers are reminded that students previously learned to find the volume of prisms and pyramids and explored the relationships between their volume formulas. In this lesson, students build on their knowledge as they calculate the volumes of cylinders, cones, spheres, and hemispheres, and examine how the formulas relate to one another. This task allows students to apply their knowledge to solve both mathematical and real-world volume problems.

5.2 Development of Fluency

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

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

The materials include dedicated tasks that support fluency and automaticity, such as spiraled warm-ups, adaptive drills, and discussion questions—all of which contribute to fluency development.

The lessons center on introducing a concept and providing opportunities for students to practice that concept through problem-solving while also building fluency. The materials include 42 problems within a section of the "Strand Overview" titled "Problem Strings." Tasks are sorted into routines that educators can utilize consistently to increase fluency in a section called "Problem Talks."

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

The materials include a Learning Pathway resource within the product's *Supplemental Guide,* which provides a summary of the strands included in the lesson, along with the relevant standards, key concepts presented, and connections addressed. The Learning Pathway explains how lessons are built on prior knowledge and provides practice for students to utilize math procedures in efficient, flexible, and accurate ways.

The materials employ various strategies and representations throughout the year. Students solve problems using various methods and representations, including graphs, equations, tables, and verbal descriptions. For example, in the lesson "Squares and Square Roots," students practice efficient, flexible, and accurate mathematical procedures. Students use tiles to build squares on grid paper. Then, students connect the total number of tiles to the length of each side. Students demonstrate flexibility in their thinking by transitioning between models and equations as they learn to write square roots. Students then accurately write a list of the equations and their square roots. These concepts will eventually connect to a deeper understanding of the Pythagorean, quadratic, and distance formulas in their learning path.

In the "Functions Learning Pathway," the resource uses students' prior knowledge of slope and unit rates to introduce them to the concept of functions. Students connect this to the idea that the equation of a line, which they have seen in prior grades, can be used to represent or describe a function. These ideas,

along with the concept of a one-to-one function, are spiraled throughout the lesson to ensure that students have a clear understanding of functions. The lessons support flexibility by allowing students to choose the most efficient strategy. It also promotes fluency and accuracy as students apply and strengthen their understanding of variable expressions through repeated reasoning.

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

The materials include a "Talk About It" section embedded in each lesson, which provides opportunities for students to evaluate representations, models, strategies, and solutions to enhance their efficiency and flexibility. For example, in the "Graph Linear Equations" lesson, students discuss why it makes sense to test negative numbers in equations. Students also consider two answers and compare them to determine which is easier to use.

The materials include a "Talk About It" section embedded in each lesson, which provides opportunities for students to evaluate representations, models, strategies, and solutions to enhance their accuracy. For example, in the "Construct Functions" lesson, students discuss how they found the solution to a question and are also asked to explain how they can be certain their answer is correct.

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

The materials guide students in selecting the most efficient approaches when solving mathematics problems.

In "Solve Equations with Variables on Both Sides," students consider the question, "Which side do we want to collect the variable on?" The rest of the problem is conducted efficiently. Example: $2x + 7 = 4x + 3$. The $2x$ is removed from both sides, and the new equation is written as $7 = 2x + 3$.

In "Solve Systems of Equations," students use the distributive property to solve the problem. The program tracks students' strategy choices and recommends more efficient options based on problem complexity.

5.3 Balance of Conceptual Understanding and Procedural Fluency

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

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

The materials explicitly state how the conceptual and procedural emphasis of the TEKS is addressed through the "Program Overview" within the *Supplement Guide.* Each lesson addresses conceptual emphasis through "an application problem that allows students to interpret, analyze, and evaluate the mathematical or real-world situation." While "students solidify their understanding of the mathematical concept, they use those relationships to fluently complete the grade level tasks by applying efficient, flexible, and accurate procedures to various contexts."

The "Strand Overview" within the *Supplement Guide* states how the materials address the conceptual and procedural emphasis of the TEKS. For example, the "Functions Strand Summary" specifies the conceptual emphasis as students will "take a hands-on approach to understand functions and the relationships between a table, an equation, and a graph." Also, it specifies the procedural emphasis as students should "graph linear equations, construct functions to model linear equations, and describe relationships between two quantities based on a graphic representation."

The materials show a conceptual and procedural emphasis of the TEKS within the lessons. For example, in "Reflect Geometric Figures," students use pegboards for graphing in quadrants, using blue pegs to plot points and red pegs to plot points in a reflected image with rubber bands creating a shape (conceptual). Then, students compare the points with ordered pairs organized in a T-chart to investigate the effect that reflecting a figure over the y-axis has on its coordinates (procedural).

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

The materials effectively incorporate questions and tasks that provide opportunities for students to use concrete models, pictorial representations, and abstract models, as required by the TEKS.

In "Graph Linear Equations," students use concrete models, pictorial representations, and abstract models. For example, in the "Try It!" activity, students use pegboards to physically plot points on a graph. Then, they stretch a rubber band between plotted points to create concrete models via straight-line graphs. Students then complete tables of values for both linear equations. They record ordered pairs and

draw lines on paper or diagrams to represent both trails visually using pictorial representations. Lastly, students work abstractly with algebraic equations to interpret slope, intercepts, and intersection points.

In another example within "Squares and Square Roots," students use concrete models, pictorial representations, and abstract models. In the "Try It!" activity, students use color tiles to build squares of various sizes, representing concrete models. Next, students draw squares on grid paper and label the side length and areas of the squares as a pictorial representation. Lastly, students write abstract mathematical equations and solve for square roots.

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

The materials include support for students in connecting, creating, defining, and explaining concrete and representational models to abstract concepts, as required by the TEKS.

The materials include supports for students in connecting concrete, representational, and abstract models. In "Cube Roots," the "Try It!" activity requires students to make hands-on models (concrete) with Centimeter Cubes to represent cubic volume (representational). Students physically build a cube using 27 Centimeter Cubes. They observe that the length of each edge is three, which allows them to understand that the cube root of 27 is three (abstract). The materials directly support students in connecting the physical cube model to the abstract concept of a cube root.

The materials include support for students in defining and explaining concrete and representational models of abstract concepts. In "Approximate Irrational Square Roots," students draw a square with side lengths of one inch on paper. Then, they draw a diagonal, which creates a visual model needed to explore the concept of the square root (concrete). Next, students create a number line to represent the square root of two (representational). They estimate the square root of two on the number line and then label it more accurately, connecting their understanding of square roots to the conception of symbolic number expression (abstract).

5.4 Development of Academic Mathematical Language

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.4a	All criteria for guidance met.	1/1
5.4b	All criteria for guidance met.	2/2
5.4c	All criteria for guidance met.	1/1
5.4d	The materials do not include embedded guidance to facilitate mathematical conversations, which allows students to refine and use math language with their peers.	1/2
5.4e	The materials do not include embedded guidance to anticipate a variety of student answers, including exemplar responses to questions and tasks.	1/2
—	**TOTAL**	6/8

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

Each "Strand Overview" within the *Supplement Guide* includes language development and support for all students. For example, the "Expressions and Equations Strand Overview" encourages students to use sentence stems to develop their academic mathematical language during the "Try It!" activity and to utilize general language-to-academic language connections for words such as those related to scientific notation.

The materials provide students with opportunities to develop academic language using visuals and manipulatives. For example, in "Find the Measures of Angles with Parallel Lines," students represent parallel lines and angles with AngLegs to help them visualize the meaning of the words.

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

Each "Strand Overview" within the *Supplement Guide* includes language development guidance to scaffold, support, and extend students' use of academic vocabulary when communicating. For example, the "Expressions and Equations Strand Overview" guides the use of sentence stems during the "Try It!" activities to scaffold language development and states, "As students complete each step in solving an equation, encourage them to use accurate language to describe what they did."

The materials include guidance to scaffold, support, and extend students' use of academic vocabulary in context when communicating with peers and educators. For example, in "Make a Conjecture Using a Scatter Plot," the materials encourage educators to review vocabulary and ask students how to visualize a data set with a positive trend versus a negative trend. To extend their vocabulary use, guidance encourages students to expand their data set using their understanding of the line of best fit and make predictions based on their data.

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

The "Talk About It" section of each lesson provides guidance to support students' discourse using appropriate mathematical language and vocabulary. For example, in "Make Frequency Tables," the materials recommend that educators ask students, "How else could you show the relative frequencies that you made? How can you tell whether they are more likely to vote for or against the proposition?"

The materials embed guidance to support student application of appropriate mathematical language and vocabulary in discourse. For example, in "Perform Operations Using Scientific Notation," the materials encourage educators to reread a problem with students and then allow students to draw and label their number lines to show erosion per year. Then, educators are guided to instruct students to "discuss predictions for how much erosion will occur at other points in time and how they know."

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

The materials include embedded guidance to facilitate mathematical conversations, enabling students to hear math language in conversation with peers. In "Lines and Line Segments in Transformations," students work in pairs with a pegboard. One student constructs a pre-image figure and describes a transformation that their partner performs.

In "Perform Operations Using Scientific Notation," students work in pairs to write problems for their partner to solve that involve multiplication or division of very large or very small numbers.

The materials do not include embedded guidance to facilitate mathematical conversations, which allows students to refine and use math language with their peers.

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

Each lesson includes a "Look Out!" section to support and redirect students who provide inaccurate responses. For example, in "Find the Number of Solutions," the guidance instructs that "Students might confuse whether a = a or a = b means infinitely many solutions. For an a = a case, have students go back a step in the solution." For students who have made this error, further guidance states, "students might feel more comfortable seeing the x in the equation and recognizing the equality in that step, or point out that whichever equation (a = a) is always true has infinitely many solutions."

The materials do not include embedded guidance to anticipate a variety of student answers, including exemplar responses to questions and tasks.

5.5 Process Standards Connection

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

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

The materials include appropriately integrated TEKS process standards. The materials appropriately integrate the process standards into each unit of study, with the "Strand Overview" in the *Supplemental Guide* providing an overview of the TEKS process standards incorporated into each unit.

In "Express Quantities using Scientific Notation," the materials include multiple examples of appropriate integration of process standards. Process Standard 8.1A: "Students will apply math to everyday life, society, and workplace" is demonstrated in the "Try It!" activity, where students use scientific notation to express real-world quantities, such as the density of the element krypton and the mass of a butterfly, in the "Formative Assessment."

In "Graph Linear Lines," the materials include multiple examples of how the lessons appropriately integrate process standards. Process Standard 7.1E: "Students will create and use representations" is exhibited by students using an XY Coordinate Pegboard to represent their lines, utilizing concrete representations. Students then transfer their coordinates over to a table using pictorial representation. Lastly, they write and manipulate equations using symbolic representation, appropriately integrating the process standards.

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

The materials include a description of how the process standards are connected throughout the learning pathways in the "Strand Overview" located in the *Supplemental Guide* for each grade level.

The *Supplemental Guide* in each strand contains a dedicated section for "Process Standards." In the "Statistics and Probability" strand, the materials provide a paragraph describing how process standards are implemented in the lessons of this strand: "Students deepen their understanding of data and statistics by constructing and interpreting scatter plots, determining lines of best fit, and analyzing data using slope and y-intercept. They also create and interpret two-way tables and relative frequency tables."

The process standards described in the *Supplemental Guide* are embedded in the lessons. In "Make Scatter Plots," Process standard A1 is illustrated as students create scatter plots based on a real-world

softball game problem. Process standards A2, A5, and A6 are connected as students work through a problem-solving process using hands-on manipulatives for concrete representations.

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

Each "Strand Overview" within the *Supplement Guide* includes a table that contains the content and process standards covered in each lesson. Every lesson has "8.1 A-G" listed in the process standard column, stating that all standards are covered in each lesson. The guidance states that "Hands-On Standards Math Mini Lessons provides lessons that foster collaboration and communication with and between students. Each lesson engages students to apply their knowledge of problem-solving to real-world situations, as required by the process standards."

The "Strand Overview" within the *Supplement Guide* includes an overview of how the process standards are incorporated throughout the unit. For example, the "Expressions and Equations Strand Overview" states, "Students will work with some new constructions of numerical expressions, including square roots, cube roots, and scientific notation. While students have previously learned basic concepts associated with exponents, they will now be asked to think flexibly about how they are used. In these lessons, students examine and apply properties of integer exponents, learn to find and evaluate square roots and cube roots, and learn to use scientific notation to express and compare quantities and perform calculations."

6. Productive Struggle

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

6.1 Student Self-Efficacy

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.1a	All criteria for guidance met.	3/3
6.1b	The materials do not include opportunities for students to explain and justify that there can be multiple ways to solve problems and complete tasks.	1/3
6.1c	All criteria for guidance met.	3/3
—	**TOTAL**	7/9

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

The materials provide opportunities for students to think mathematically using manipulatives, persevere through solving problems by breaking multi-step problems into manageable parts, and make sense of mathematics by providing students with independent practice problems.

The materials provide activities that enable students to make sense of mathematical concepts. In "Solve Systems of Equations," the materials provide an opportunity to persevere when students use Centimeter Cubes to model a problem, connecting concrete and abstract methods and supporting conceptual understanding. The lesson encourages students to make sense of the problem they are solving in the "Talk About It" section when it asks, "Why is it important to reread the problem after you've found the values?"

The materials provide opportunities for students to persevere through solving problems. In the lesson "Solve Systems of Equations," students persevere through solving problems when the materials ask students to solve multi-step problems. In "Try It!," students substitute the new equation into the second equation and use the distributive property to solve for the number of boys.

The materials provide activities that enable students to explore and make sense of mathematical concepts. In "Solve Systems of Equations," students create and apply algebraic reasoning to a real-world situation. Students also engage in mathematical reasoning when they use models to represent real-world problems and to analyze relationships between variables.

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

The materials do not include opportunities for students to explain and justify that there can be multiple ways to solve problems and complete tasks.

The materials support students in understanding that there can be multiple ways to solve problems and complete tasks. For example, in a lesson titled "Identify a Function," students analyze patterns and identify functions in a function expression. The "Try It!" activity with XY Coordinate Pegboard then allows students to use another method to plot points on a coordinate plane.

In "Solve Systems of Equations," students use colored cubes in the "Try It!" activity to model multiple methods of substitution and solving equations.

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

The materials offer multiple opportunities for students to engage in math, write about math, and discuss it with their peers. The "Try It!" activity section of each lesson features a hands-on approach that allows students to engage in math activities using manipulatives. The "Talk About It" section offers students opportunities to discuss math with their peers and educators. The "Formative Assessment" section provides students with the opportunity to solve math problems by writing.

The materials are designed to require students to make sense of mathematics through multiple opportunities for students to write about math with peers and educators. For example, in "Graph Linear Equations," the "Solve It" section prompts educators to reread a problem with students and then have students "write a paragraph describing their graphs, focusing on the directions of the graphs, where the graphs intersect each axis, and how close the graphs are to the origin."

The materials require students to make sense of mathematics through multiple opportunities for students to discuss math with peers and educators. For example, in "Angles in Transformations," the materials prompt students to "work in pairs using XY Coordinate Pegboards. One student makes a figure and describes a transformation for their partner. Students should record the intended transformation and check their answers using a protractor."

6.2 Facilitating Productive Struggle

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.2a	The materials do not provide educators with guidance on students' opportunities to reflect on their problem-solving approaches.	4/8
6.2b	All criteria for guidance met.	4/4
—	**TOTAL**	8/12

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

The materials do not provide educator guidance on students' opportunities to reflect on their problem-solving approaches.

The materials support educators in guiding students to share their problem-solving approaches, including explanations, arguments, justifications, and multiple points of entry. The "Talk About It," "Solve It," and "More Ideas" sections support educators in guiding students to share their problem-solving approaches and strategies.

In the "Talk About It" section of "Identify Congruent Figures," students share their responses to the question "How can you tell if two figures are congruent?" (explain). The materials then ask teachers, "Have students show two transformations, such as a reflection and a rotation, to verify their responses" (argument/justification). The "More Ideas" section presents various approaches to identifying congruent figures (multiple points of entry).

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

The materials include educator guidance to support educators in responding to student needs. Each lesson contains a "Look Out!" section that informs educators of areas where students may be confused, as well as suggested feedback to address misconceptions. For example, in "Solve Equations with Variables on Both Sides," the "Look Out!" section states that students may "be confused why the variables were collected on the right side of the equation." The section then offers guidance for educators to provide feedback to remedy student confusion, such as "show that the same solution would occur if variables were collected on the left side of the equation."

The materials provide a consistent "Potential Misconceptions" section within each of the *Supplemental Guide*'s "Strand Overviews." For example, in the "Functions Strand Overview," the "Potential Misconceptions" section includes the statement that "students may see a horizontal line passing through two points and falsely conclude that it is not a function."

Additionally, the "Look Out!" section within each lesson highlights potential misconceptions that students may encounter when approaching the content. For example, in "Reflect Geometric Figures," the "Look Out!" section informs educators to "watch for students who transpose coordinates and plot the y-coordinate first, rather than after the x-coordinate." In another example found in "Find the Measures of Angles Using Parallel Lines," the "Look Out!" section states that students "may be confused about which number to choose on the protractor when measuring an angle." The materials continue with suggested remedies to the anticipated misconceptions.