Edmentum, Inc.

Supplemental English Mathematics, 4
Exact Path Mathematics–Grade 4

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Supplemental	**9781641032582**	**Digital**	**Adaptive**

Rating Overview

TEKS SCORE	TEKS BREAKOUTS ATTEMPTED	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	8	0	Flags Addressed	Not Applicable	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	17 out of 21	81%
2. Progress Monitoring	22 out of 23	96%
3. Supports for All Learners	34 out of 37	92%
4. Depth and Coherence of Key Concepts	14 out of 16	88%
5. Balance of Conceptual and Procedural Understanding	35 out of 38	92%
6. Productive Struggle	16 out of 19	84%

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)	1	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 a rationale for learning paths across grade levels (vertical alignment).	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	All criteria for guidance met.	2/2
—	**TOTAL**	13/14

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.

In the Access and Teach section, the materials clearly define the Texas Essential Knowledge and Skills (TEKS).

The Access and Teach section of the materials includes a link to the English Language Proficiency Standards (ELPS) information.

The Access and Teach section clearly illustrates the concepts covered in the materials. Users can navigate the available materials by selecting between options such as search by skill, search by standard, or topic name.

The *Teacher Resource Guide* provides rationale for horizontal alignment within the same grade, but fails to provide rationale for vertical alignment opportunities.

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

An implementation guide is included in the *Teacher Resource Manual*. It includes how to access Guided Practice, Differentiated Support, and Independent Practice for each lesson. It gives descriptions of how teachers can respond to common errors and misconceptions. It also provides support on how teachers can use the materials in small group versus whole group instruction.

The materials include a link to Learn & Support—Exact Path, which includes implementation guidance with recommendations and strategies for effective educator use.

These materials include Lesson Ideas with the resources for implementation, including Components, Lesson Objectives, Learning Modalities, Warm-Up, Procedures, Independent practice, Closing activity, Advanced Learner option, Struggling Learner Option, Extension Activities, and English Language Learners (ELL) Teaching Tips.

The materials include *Teacher Resource Manual* with explanation of Lesson Ideas format, with general teacher guidance to see each lesson for specifics.

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

The materials provide students with a Learning Path that links the skill with the Standard Covered, which references the TEKS organized for each student by "previous skill," "current skill," and "next skill."

The materials include a K–12 Learning Progression Report that lists the skill with the corresponding domain and skill statement. The materials include a Student Learning Path Placement with minimal guidance.

The Assessment Solutions under Diagnostic Results and Reports is an overview that includes summaries of Class Results and Student Summary Report, which further defines Adaptive Diagnostic Experience, Diagnostic Scale Score, Domain Details, Grade Level Proficiency (GLP), Student Growth, Typical Growth, Learning Path Placements, Lexile and Quantile Score, and National Percentile Rank (NPR).

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

The materials give lesson internalization for certain lessons. These include implementation guides with materials needed, step-by-step instructions on how to teach the lesson, and ELL Teaching Tips. It also sorts TEKS into their respective domains based on Texas Education Agency (TEA) classification. You can access a student's Knowledge Map to show how they are progressing through the units/domains.

The materials include a "Guidance for Educators" document that references the New Teacher Homepage, which can also be accessed from the Help Center button. This resource explains how educators can view how students are performing on their individual learning paths and how the teacher may respond to students in each of the three categories of Needs Attention, May Need Support, and Deserves Recognition.

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

The materials include an Understanding the Administrator Dashboard resource that gives administrators guidance for overseeing the Exact Path implementation and monitoring process.

The *Teacher Resource Manual* includes guidance to support educators with material implementation. This includes program structure, pacing recommendations, grouping applications, quick start guides, rubrics, and checklists, and general information found in the Exact Path Learn and Support page. Model video lessons provide exemplars for educators to review before lesson delivery; these are found on individual lessons.

1.2 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	This guidance is not applicable to the program.	N/A
1.2b	The materials do not include lesson components with suggested time frames.	4/5
1.2c	The materials do not contain support for families in Spanish and English for each unit, with suggestions on supporting the progress of their student.	0/2
—	**TOTAL**	4/7

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

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

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.

The materials provide TEKS- and ELPS-aligned assessments that adapt to student progress. The materials include Lesson Idea documents for each skill or standard. The students are assigned lessons based on their performance on the diagnostic assessment.

The location for the resources is found in Texas Resources, Help, and then Exact Path Guide, which contains all of the ELPS and TEKS that are aligned to each skill. The timestamps provided do not give guidance to teachers as to the length of each component.

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

The materials contain support for families in both English and Spanish, such as videos ("Getting Started" and "Exact Path for Families"), parental letters, and embedded support for students to facilitate translations from English to Spanish (additional languages available); however, these supports are not unit, pathway, or cluster specific, nor do the supports vary depending on the progression of the student.

The text-to-speech function provides only English audio. Navigation tools for students include an "HOLA" icon that, when clicked, enables access to embedded language supports.

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	All criteria for guidance met.	4/4
2.1d	All criteria for guidance met.	4/4
2.1e	All criteria for guidance met.	4/4
—	**TOTAL**	16/16

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

The material explains the diagnostic assessments are evidence-based, computer-adaptive tests designed to provide information about the strengths and needs of individual students, classrooms, schools, and districts in math. For example, the material explains the available data, as well as provides details on available reports that may be used to assist stakeholders in interpreting test results.

The materials include definitions and intended purpose for the diagnostic assessment. This section explains diagnostic assessments given "are grade level diagnostic tests, designed to measure a person's knowledge without regard to their grade level." The materials further explain computerized adaptive tests that are student centric, "which means that students receive targeted questions that adjust in real time based on their responses and individual ability level."

The materials include a video, "Welcome to Your Diagnostic," for students and families. The video explains what a diagnostic test is, how it works, and what students can expect to see and do during the assessment.

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

The materials provide Test Administration Guidelines, which includes procedures and recommendations for before, during, and after testing. This resource outlines the Test Administration Protocol with steps for administering the assessment such as: preparing students and the testing environment, suggested verbal prompts, and provides approximations for testing times.

The materials include guidelines for allowable testing conditions and explains how the validity of the test can be altered by time considerations, room logistics, display settings, accommodations, audio

accommodations, visual accommodations, ELLs guidance, calculator use, and recording responses through the use of a scribe.

The material explains that sound testing procedures are the hallmark of testing security. For example, it is recommended that test administrators consistently follow procedures presented before, during, and after testing. The material includes self-guided training to refresh an administrator's understanding of the diagnostic assessment and the functionality.

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 include ways for teachers to administer assessments with accommodations including three audio features: automatic read aloud, prerecorded on demand audio, and text-to-speech with guidance regarding the use of text-to-speech accommodations only for IEP and 504 students. Also included are visual accommodations in three categories: blindness, color blindness, and low visual activity through the use of grayscale and screen magnifiers. Blindness gives the guidance of scribe usage. Calculator use is covered in the case of IEP or 504 accommodations are required and is a prompt given on appropriate questions.

The materials include support for ELLs including teacher guidance to provide a dictionary. The product also includes, "built-in text-to-speech functionality, closed captions for videos, highlighted vocabulary words with built-in tools for translation, definition, and audio support." These supports are included to prevent teachers from interpreting the text too much.

The materials contain guidance for educators to print and administer assessments based on individual students' accommodations. The platform includes text-to-speech, calculators, and content and language support based on students' individual needs.

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

In grade 4, the diagnostic assessment included varying complexity levels on multiple skills. For example, there were questions on decomposing numbers that increased in complexity as questions were answered correctly.

Diagnostic assessments included TEKS-aligned questions from grades 2–5 with varying complexity levels. For example, a grade 4 diagnostic assessment included questions related to using the commutative and associative properties to multiply, identify factors, pairs, and multiples 1–100, evaluate expressions, solve equations, and inequalities.

The material explains that Exact Path is a "holistic literacy and math intervention program based on a skills framework that is strongly aligned to TEKS." For example, it incorporates three Adaptive Diagnostic Assessments varying from defining strengths and needs, then growth reflection, providing individualized learning paths to address skill gaps and ensure progress.

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 TEKS-aligned formative assessments, such as Learning Path practices and progress checks. For example, the grade 4 Priority Skills Lesson: "Add and Subtract Fractions with Like Denominators" includes five practices and a mastery quiz.

The materials include several formative assessments that have varying levels of complexity. For example, in the assignment Multiplication, the student has to answer basic multiplication questions, complete distributive property multiplication problems, and answer multiplication questions with area models.

The materials in this progress check include multiple choice, fill-in-the-blank, and multi-select answer choices. The Progress Check includes perimeter and area with finding the missing numeral for the expression, finding the length and width when given the perimeter, finding the length when given area and width of a rectangle, and finding the area of a square when given two sides.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	The materials included guidance for interpreting the correct answers only; no rationale for incorrect answers included.	2/3
2.2b	All criteria for guidance met.	1/1
2.2c	All criteria for guidance met.	2/2
2.2d	This guidance is not applicable to the program.	N/A
2.2e	All criteria for guidance met.	1/1
—	**TOTAL**	6/7

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

The materials include Standards Mastery Assessments, which are assessments the teacher can assign by TEKS. On the printable version, the teacher has access to the correct answers and explanations for the correct answers.

The materials include scoring information and guidance for interpreting student performance through the "Diagnostic Experience" graph. The graph represents the student's experience on the diagnostic and shows which items were answered correctly and incorrectly. However, it does not include a rationale for incorrect responses.

The materials break down students' performance by standards. This allows teachers to view and identify what standards are being mastered and areas that require improvement. For example, mastery is listed as developing, approaching, mastery, and strong mastery.

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

In the Teacher Resource Drawer, materials include instructor access to Lesson Ideas, which include adaptations for acceleration and remediation, and teacher support like anticipated misconceptions and feedback prompts. These Lesson Ideas are directly tied to the skills students are learning in their Learning Path.

The materials include Lesson Ideas that contain step-by-step implementation guidance, such as scripting, ideas for differentiation based on student needs, guided lesson plans, answer keys, student practices, and extension activities.

The materials provide guidance for the use of included tasks and activities. For example, each Lesson Idea has implementation supports that include: scripting, ideas for differentiation based on student needs, guided lesson plans, and extension activities.

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 a Knowledge Map for teachers to assess students' progress on their Learning Path, which shows educators what skill a student has mastered, not mastered, currently practicing, and/or is struggling on.

The materials include tools for students to track their own progress and growth. For example, the Student Goal Tracker Gameboard allows students to keep track of their personal goals and rewards.

The materials include tools for teachers to track student progress and growth. For example, teachers can pull information from students' progress through their learning report by accessing the Skills Performance Report, Learning Path Progress Report, and Learning Path Availability Report.

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.

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

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

The materials for the student include immediate feedback after answering a question, telling them they answered the question correctly or answered the question incorrectly, and giving them another chance to answer it correctly.

The materials include adaptive assessments embedded within each lesson, providing real-time data on student understanding. For example, the Learning Path consists of lessons, practices, and progress checks. A score of 80 percent or above on the progress check demonstrates mastery, but a score below 80 percent demonstrates a need for additional assistance. The student can work through the module again and attempt the progress check a second time. If the student scores below 80 percent on the progress check a second time, they will be given a building block lesson that is focused on a prerequisite skill. If they master that building block lesson, they will advance back to the original skill with an alternate lesson.

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	All criteria for guidance met.	3/3
3.1e	All criteria for guidance met.	2/2
—	**TOTAL**	12/12

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

The materials provide lessons and practice problems for students based on their current level of understanding while automatically adjusting the level of the skills based on the student's performance on the diagnostic assessment. If a student struggles with a particular concept, the program provides additional lessons and practice targeting that skill before moving on to more advanced content.

The materials include explicit educator guidance that scaffolds lessons for students who have not yet reached proficiency in prerequisite or grade-level concepts and skills. For example, in most Priority Skills Lessons there is a Struggling Learner Option document that provides teachers with step-by-step activities and verbal prompts for the teacher in order to support students that have not yet reached proficiency.

In grade 4, the Lesson Idea materials include designated Struggling Learner Activities. For example, the Compare Fractions Lesson Idea resource guides the teacher through small group instruction using a hands-on, physical representation of fractions for struggling students to make the concept more concrete.

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 online lessons introduce vocabulary through direct teaching. As a new vocabulary word is introduced, the lesson will bold that word, give a mathematically correct definition, and give an example and/or visual representation of the word. While going through the lesson, the student can access the dictionary to look up unfamiliar words.

The materials include Lesson Idea "Comparing Decimals," teachers are provided with Key Lesson Vocabulary, both academic such as: *compare*, *decimal*, *symbol*, and phrases such as, *greater than*, *less than*, and *equal to*.

The Lesson Idea materials provide explicit guidance for embedded supports. For example, in the Lesson Idea "Addition and Subtraction" Resource, teachers are given key lesson vocabulary, directed to form small groups with structured roles, and use manipulatives to introduce and reinforce key concepts.

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 Lesson Ideas, which include a section on Extension Activity Tips, as well as an Advanced Learner Activity. These can be used for students who have mastered the lesson in their pathway and need additional extension activities. Adaptive materials automatically provide advanced learning paths for students who show mastery of current content.

In grade 4, the Lesson Idea materials include designated extension activities in the Advanced Learner section that provide opportunities for enrichment for students who have demonstrated proficiency in grade-level content. In the "Symmetry" Lesson Idea resource, students generate their own symmetry activity and then have an additional opportunity to practice using the Extension Activity.

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

The materials include instructions for how educators can enable audio controls for students in need of click-to-speak accommodations; enabling audio controls allows them to select any text and have it read to them. This accommodation can be toggled on and off for all and select students.

The material includes accommodations that educators can enable or disable to support individual students. For example, text-to-speech reads all available text to the student. This feature must be enabled on a per-student basis. When text-to-speech is enabled for a student, they may toggle on Click to Speak in the Reader Tools toolbar. This will allow the student to select any text and have it read to them. The sentence being read will highlight yellow, and the current word being read will be blue.

The platform includes the ability to toggle on and off the following features: text-to-speech, calculators, and content and language support in the individual student accounts.

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 Lesson Ideas, providing teachers various ways that students can show their knowledge of a skill. In the grade 4 Lesson Idea "Patterns," the students will work with patterns in a variety of ways, including working individually and with their tablemates, and using a variety of tools, such as pencil and paper, white boards, and colored tiles.

In grade 4, the Lesson Idea resource includes teacher guidance on options and supports for students to demonstrate understanding in multiple ways. For example, in the "Points, Lines, Rays, and Segments" lesson, the teacher guides students through the warm-up using a graphic organizer, then students have the opportunity to redo their warm-up based on the new learning, followed by an independent practice activity.

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	All criteria for guidance met.	5/5
3.2b	This guidance is not applicable to the program.	N/A
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**	12/12

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 grade 4 Lesson Idea "Factors and Multiples" starts with a warm-up to review multiplication facts, which helps the students activate prior knowledge before beginning the lesson. As the lesson starts, the teacher's script says, "Tell students that factors are the numbers multiplied together to get the product (answer). Multiples are the numbers you get as the products to multiplication problems to anchor the big idea of what factors and multiples are."

The materials include the Lesson Idea "Patterns," the Warm-Up Procedure, Advanced Learner Option, Struggling Learner Option, and Extension Activities components. These components include steps and prompts for teachers to recognize types of patterns and determine what comes next using pictures, numbers, colored tiles, and abstract figures.

In grade 4, the Lesson Idea resource includes teacher guidance to build knowledge by activating prior knowledge, anchoring big ideas, and highlighting key patterns. For example, in the "Time" lesson Warm-Up, the teacher asks students to activate understanding about how long certain activities take. In the main lesson, the teacher instructs students that in the Warm-Up, they were measuring how much time passes from the start to the end of an activity, which is defined as elapsed time, building on the concept introduced in the warm-up activity.

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

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

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

In the Lesson Idea "Factors and Multiples," there are materials for whole-group, small-group, and independent practice. The educator guides the students through a whole-group warm-up and lesson, and then the students work independently on an activity. The materials allow the educator to pull small groups for struggling learners, while the extension activity allows students to work collaboratively.

The materials include multi-tiered intervention methods for various types of practice and structures, and educator guidance to support effective implementation. For example, materials include a *Teacher Resource Manual* that outlines Lesson Ideas and how they work, explains the components of the lessons, describes the types of teaching practices, and provides examples for Lesson Idea integrations in both whole group and small group settings.

Grade 4 lesson materials include various types of practice through guided practice, independent practice, and differentiated learner support. For example, in the Numbers and Operations, Division lesson, materials include a warm-up, guided practice (including paired work), and independent practice. There are also materials and teacher guidance for struggling and advanced learner activities.

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 the statement, Exact Path provides personalized learning experiences for advanced students while maintaining age-appropriate content (up to two grades above their current level). Teacher customization options include modifying or augmenting learning paths for students requiring targeted acceleration. Each lesson plan provides differentiation procedures for advanced learners and extension activities for further enrichment.

Grade 4 lesson materials include the "Factors and Multiples" lesson. The materials also include an advanced learner activity that directs students to complete the activity with minimal direction and then explain their thinking in a paragraph. In the enrichment materials, students are asked to create a visual model of five one-digit numbers.

In grade 4, the "Money" lesson materials include an extension that directs students to complete designated fill-in-the-blank advanced learner questions. In the enrichment materials, students can practice the skill with real-world connections using newspaper advertisements.

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

The Knowledge Map provides educators real-time feedback on a student's Learning Path progress. Educators can see which lessons a student has failed, is currently struggling with, and has mastered. Educators can then provide prompt guidance through the Lesson Ideas.

The material includes a Teacher Homepage that streamlines intervention by giving educators access to a new dashboard that organizes student learning path data into three categories: Needs Attention, May Need Support, and Deserves Recognition. Teachers can quickly sort students by critical metrics, identify students who need immediate support, and link to helpful resources to keep students motivated and moving toward success.

3.3 Support for Emergent Bilingual Students

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

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.3a	This guidance is not applicable to the program.	N/A
3.3b	The material includes increasingly more academic language (at least one level of language proficiency), but does not include increasingly more academic language for one, two, or more additional levels.	1/4
3.3c	All criteria for guidance met.	1/1
3.3d	All criteria for guidance met.	8/8
3.3e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	10/13

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.

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

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.

The materials contain educator guidance on providing and incorporating linguistic accommodations to support educators in assisting English Language Learners by providing ELL Teaching Tips. For example, in the Lesson Idea "Compare Fractions," educators can pre-teach the academic vocabulary words necessary for the lesson. The materials also suggest having students respond to mathematical questions in their home language first and then translate to English, if needed.

The materials do not include embedded linguistic accommodations for all levels of language proficiency, designed to engage students in using increasingly more academic language.

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

The materials include implementation guidance to support educators in effectively using the materials by describing allowable testing conditions and special accommodations. This includes built-in text-to-speech functionality, closed captions for videos, and highlighted vocabulary words with built-in tools for translation, definition, and audio support.

In grade 4, the Lesson Idea materials include designated ELL Teacher Tips that provide implementation guidance to support educators in effectively using the materials. For example, in the Lesson Idea "Addition and Subtraction" Resource, teachers are guided to provide students with words in their home language to talk about equivalent fractions. For example*, equivalente* is the Spanish word for *equivalent*, and *fracción* means *fraction*. Sentence frames help students use the corresponding English words.

The materials include implementation guidance that supports educators in effectively using them in state-approved bilingual/ESL programs. For example, the Lesson Idea "Factors and Multiples" includes ELL Teaching Tips for assistance with key lesson vocabulary, including academic, visual organizer, and partner work.

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 materials include embedded guidance for teachers within the Lesson Ideas to help students develop academic vocabulary, increase comprehension, build background knowledge, and make cross-linguistic connections through oral and written discourse. For example, in the Lesson Idea "Points, Lines, Rays, and Segments," academic vocabulary words are pre-taught to facilitate the use of vocabulary through written and oral discourse. Providing visual organizers helps students connect the vocabulary words to the concepts. Partner work is allowed to encourage comprehension through oral discourse.

Grade 4 Lesson Idea materials include designated lesson guidance and ELL Teacher Tips that provide 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. For example, in the Lesson Idea "Real World Problems" resource, students build background knowledge in the main lesson by identifying knowns and unknowns. They make comprehension gains through the Teaching Points Activity. In the ELL Teacher Tips, academic vocabulary supports are provided through the graphic organizer, and cross-linguistic connections happen through the partner work activity and the native language text in the L1 Supports Activity.

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 real-world lessons, such as the lesson "About the Zoo," which discusses why estimating is important in a real-life scenario. The students have to use rounding as a strategy to estimate, first by rounding the parts of an expression, then using compatible numbers to estimate to find the answer to an expression. In the progress check, the students must find the best numbers to estimate answers.

The materials provide practice opportunities that require students to demonstrate depth of understanding aligned to the TEKS. For example, in the grade 4 practice assignment, 'Remainder Robots', students are given the opportunity to practice solving division problems using base ten models, equations, standard algorithms, and independently solving a word problem using drag and drop, drop down, and identifying answers from a bank provided.

The materials include Learning Paths that have learning, practice, and mastery checks, which are aligned with the TEKS listed in the overview of the learning pathway, as well as checks at the end of each path to assess for mastery.

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 include opportunities for students to engage in questions and tasks that increase in rigor and complexity. The Learning Path introduces each student to a set of skills identified for each student to work on, but these skills are not restricted to a given grade level; instead, the skills represent critical learning components from the entire K–12 learning progression that match a student's academic readiness.

The materials include on grade level work as well as advanced learning options. For example, when learning about equivalent fractions, the 'Advanced learner' option provides increased rigor and complexity by comparing four vases with fractions of water with two matching equivalent fractions. The Extension activity provides a step further in increased rigor and complexity by utilizing fraction bars and allowing students to make their own equivalent fractions.

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 do not connect students' prior knowledge of concepts and procedures to the mathematical concepts to be learned in 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 use strip diagrams to compare multiplication and division problems. Strip diagrams are used frequently throughout the student's Learning Path to solve problems and make connections.

The materials include students beginning with a review of right angles, then prompted to identify pictures of right angles, and ending with identifying pictures of right triangles.

4.2b – Materials demonstrate coherence vertically across concepts and grade bands, including connections from grade K–6, by connecting patterns, big ideas, and relationships.

The materials include students' introduction of the concept of factors. The students are taught what a factor is and then shown how they can use the previously learned skill of division to figure out the factor pairs of a number.

The materials include the statement, skills are not restricted to a given grade level; instead, the skills represent critical learning components from the entire K–12 learning progression that match a student's academic readiness.

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.

In grade 4, materials include students starting the lesson with a warm-up designed to connect equivalent equations to the lesson on equivalent fractions. The teacher starts by writing the equation 15 + 5 = 10 + 10 so the students can see that although the expressions are different, they both equal 20. The lesson then goes on to explain that equivalent fractions work the same way.

Lessons and activities in the program do not make connections to concepts or procedures to be learned in future grade levels. The materials do not include prompts or guidance as to how to connect the lessons to concepts to be learned in the future.

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 do review previously learned skills or concepts across the learning path and mainly focus on current learning. The Knowledge Map shows students' progress throughout the skills.

The materials include guidance for teachers in the *Teacher Resource Manual* under the header Accommodation Support and Learning Extension, which provides suggested adaptations for struggling learners. The adaptations include support for struggling learners with teacher-guided practice and reassignment to previous skills lessons for reinforcement of lessons.

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

The materials include guidance for teachers in the *Teacher Resource Manual* under the header Accommodation Support and Learning Extension, which provides suggested adaptations for struggling learners.

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 models and representations for mathematical concepts and situations.

The materials include questions and tasks that provide opportunities for students to interpret and analyze models and representations for mathematical concepts and situations. In the Lesson Idea "Money," procedures include students being shown coins and a dollar bill with real or replicas of money. Students are asked what the value of each is. Students are then asked, "How many pennies make one dollar?" "How many quarters make one dollar?" or "How many nickels make one quarter?"

The materials provided in The Lesson Idea resource for "Angles" guides students through developing an angle resource book, including examples of each type of angle. Once developed, this resource allows students to review and analyze when working through additional angle identification angle practice activities.

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

The materials provide concrete and pictorial representations demonstrated on the grade 4 worksheet Pizza Delivery, where students are given several models to choose from to help them compare fractions. They are then asked to draw three models representing fractions that are greater than 1/2.

The materials include the Lesson Idea "Real World Problems" in which students are prompted to write five real-world, multi-step problems, solve them using the problem-solving strategies from the lesson, and create a picture that represents the scenarios.

The materials provide students with the opportunity to create concrete models and pictorial representations to represent mathematical situations. For example, in the "Money" Lesson Idea resource, students are given a collection of coins to use to show the amount of $0.55.

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

The materials provided, such as the grade 4 worksheet, Ready for Blast Off, the students have to find factor pairs similar to the ones they learned in the lesson. Then, students have to use their knowledge of factors to solve the riddle at the bottom of the worksheet: "Meg found a number between one and 100 that has 12 factors. She is giving you a clue. What is the number?"

The materials include the grade 4 Lesson Idea "Equivalent Fractions," where students use their understanding of equivalent fractions to solve problems in real-life contexts. For example, "A florist has four flower vases that are all the same size. The first flower vase is 2/3 full of water. The second flower vase is 3/4 full of water. The third flower vase is 1/2 full of water. The fourth flower vase is 4/6 full of water. Which two flower vases are filled with the same amount of water?"

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.

In the grade 4 practice lesson "Multiply to Mars," the students find multiples of numbers. For example, given a set of nine numbers, they must discover which numbers are multiples of six. This supports fluency and automaticity, as it helps students quickly learn their multiples.

Grade 4 materials provide the "Round Numbers up to 1,000,000" lesson, and the Round Trip independent practice activity allows students to build fluency and automaticity by practicing rounding numbers.

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

In the grade 4 lesson "Solving Multiplication Story Problems," the program walks students through various ways to solve word problems. At one point, they offer drawing a picture as a strategy. For this problem, you might draw a chart like the one shown here. This activity lets students see multiple, efficient, flexible, and accurate ways to solve word problems.

The Lesson Idea "Real-World Problems" materials provide activities such as Real World Problems Independent Practice, which allow students to apply efficient, flexible, and accurate problem-solving methods.

The materials provide Learning Path Resource—Clubhouse Cleanup, an online activity to learn how to use addition, subtraction, multiplication, and division to solve problems for flexible, efficient, and accurate problem-solving strategies.

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

In the grade 4 Lesson Idea "Real-World Problems," the students break down and evaluate word problems. The instructor asks, "What do I know from the problem? and Is there any extra information?" The instructor continues asking probing questions to help the students get the information they need

from the word problem and solve it accurately. However, the instructor does not tell the students how to solve the problem, so they have the flexibility to solve it as they choose.

Grade 4 Lesson Idea "Perimeter and Area," the students evaluate real-life objects to determine whether they would find the area or the perimeter of that object. The students discuss and defend their answers with one another, promoting accuracy while letting students evaluate whether each other's answers are right or wrong.

Lesson materials provide the Solving Word Problems Involving Time Lesson Idea activity. During the main lesson, students are provided with a Start Time, End Time model to help solve time-elapsed problems, and the teacher is directed to provide strategies and support for efficiency, flexibility, and accuracy.

5.2d – Materials contain guidance to support students in selecting increasingly efficient approaches to solve mathematics problems.

In the grade 4 lesson "Comparing Fractions," the students are taught to use fraction bars as a less convenient way to compare fractions. Fraction bars help us quickly compare fractions, but they are not always convenient. The lesson then goes on to teach comparing fractions with common denominators to increase efficiency in problem solving.

Grade 4 lesson materials include the Solve Multi-Step Word Problems Lesson Idea activity, where students solve multi-step word problems using the four-box graphic organizer resource. Finally, students solve multi-step problems using increased efficiency in the independent practice worksheet that does not include the four-box problem-solving model.

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.

Grade 4 Lesson Idea "Adding Fractions" provides an overview, Teacher Tip, that states, "Using visuals will help students build conceptual knowledge and understand how the fractions are equivalent." The lesson teaches adding fractions through visual components, which helps build a conceptual understanding, and adding fractions using the standard algorithm, which helps create a procedural understanding.

The materials explicitly state how the TEKS' conceptual and procedural emphasis is addressed. The Lesson Idea "Compare Fractions" explains how students explore the concept of comparing fractions conceptually by using measuring cups with sand/colored water, recipes, and models before transitioning to drawing their own models and determining the inequality of fractions with unlike denominators with word problems.

The materials explicitly state how the conceptual and procedural emphasis of the TEKS is addressed. The Lesson Idea "Equivalent Fractions" explains how students explore equivalent fractions conceptually by using manipulatives, shading models, and shading fraction bars before exploring equivalent fractions that may be divided differently, but the shaded area is equal practice.

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 include the Lesson Idea "Patterns," where students use colored square tiles to create numerical patterns (concrete model). They then draw these tiles and connect them to the pattern they created (pictorial and abstract).

The materials include the Lesson Idea "Equivalent Fractions," which has students use beans or centimeter cubes and fraction bars to demonstrate concrete models of equivalent fractions. The students also have a cut-and-glue activity where they match pictorial representations of equivalent fractions.

In the grade 4 "Classify Two-Dimensional Figures" Lesson Idea resource, the learning objective states that students will be able to classify triangles as right, acute, obtuse, equilateral, isosceles, and scalene. In the main lesson, students are directed to create a visual representation of two-dimensional figures to use as

an ongoing resource in the identification process. In the Struggling Learners section, students create a pictorial representation of two-dimensional figures.

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 the Lesson Idea "Equivalent Fractions," where students use counters and fraction bars to create two equivalent fractions. The teacher helps them connect their concrete model to the abstract names. Then, the students look at pictorial representations of fractions to determine if the two fractions are equivalent while writing the name of each fraction. Students also have a cut-and-glue activity where they find two equivalent fraction pairs and match them together.

The materials include support for students in connecting, creating, defining, and explaining concrete and representational models to abstract concepts, as required by the TEKS. For example, in the "Points, Lines, Rays, and Segments" Lesson Idea resource, students define and create examples of lines, rays, and segments in the primary lesson. Additional Learner supports the teacher to use real-world examples to explain point, line segment, line, ray, and plane to students to support the development of the abstract to concrete learning concepts.

The materials include support for students in connecting, creating, defining, and explaining concrete and representational models to abstract concepts, as required by the TEKS. For example, in the "Angle Measurement" Lesson Idea resource, students are guided to use a protractor and models of different angles to represent an understanding of how to measure angles as outlined in the learner objective. Additional Learner supports give students pictorial representations to practice sorting angle measurements and creating abstract pictures made up of angles.

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	All criteria for guidance met.	2/2
5.4e	All criteria for guidance met.	2/2
—	**TOTAL**	8/8

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

In the grade 4 lesson "Hello, Goodbye," the materials provide visuals to help students develop academic vocabulary by visually showing the term *equivalent fraction* in many different ways. By seeing equivalent fractions represented in various models, such as in pans of pizzas, students can apply the term throughout their learning with mathematical vocabulary.

In the Lesson Idea "Compare Decimals," materials provide opportunities for students to use academic mathematical language using models, the dollar sign, and numerals to compare decimals. Then students read the dollar amounts aloud and decide which amount is greater.

The materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, or other language development strategies. For example, in the "Angles" Lesson Idea resource, the teacher is directed to introduce the academic terms *angles*, *obtuse angle*, *acute angle*, and *right angle*, then guides students through the development of a flipbook visual to foster the development of the academic language.

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.

In the Lesson Idea "Angles," students and the educator create a flipbook on angles, including definitions, and examples. Afterwards, the educator shows students a picture of an angle, and the students discuss with the educator what type of angle it is based on the definitions they included in their flipbook. Finally, students work with a peer to match angles to definitions.

The materials include the "Expanded Notation" Lesson Idea resource, where teacher guidance directs students to work together in groups to practice the expanded and standard notation matching game. The struggling learner activities give students the chance to communicate with their teacher as they work through and scaffold the concept of expanded notation.

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

The grade 4 Lesson Idea "Equivalent Fractions" materials suggest that educators model a think-aloud. In this think-aloud, the educator should model how to use appropriate mathematical language and academic vocabulary to give students an example of how to discuss within their groups.

In the "Factors and Multiples" Lesson Idea resource, the materials include guidance on eliciting discourse from students. The teacher is directed to ask students to think of a multiplication problem that includes two as a factor for each multiple listed on the T-Chart and to record those multiplication problems, using the example T-Chart as a reference. Following that discourse opportunity, the teacher asks students how they would find the 5th multiple of a number, 8th, 12th. The teacher will guide students to see that the 5th multiple is found by multiplying the number by 5, etc.

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

In the grade 4 Lesson Idea "Decompose Fractions," educators are provided with sentence frames to help students discuss the problems they are working on. These sentence frames provide students with a guide to practice appropriate mathematical language.

The Lesson Idea "Solving Word Problems with Fraction Multiplication," prompts early finishers to apply what they have learned and create their own problems about multiplying whole numbers and fractions, then allows students to exchange problems to solve to encourage mathematical conversations among peers.

The materials include Lesson Idea "Factors and Multiples," where the teacher explains to the students that they will learn what factors and multiples are. "Draw a T-Chart on the board. Label one side Factors and the other side Multiples. Tell students that factors are the numbers multiplied to get the product (answer). Multiples are the numbers you get as the products of multiplication problems." The teacher then has the students begin partner work, allowing students to do individual work with a partner. It will enable students to complete the Independent Practice with a partner for added support.

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

The materials include the Lesson Idea "Decompose Fractions" resource, which provides an Observe and Response section using "If a student . . . and then" statements. This section offers guidance for anticipating misconceptions and addressing inaccuracies. For example, if a student adds the denominators when decomposing, then remind students that since the denominators are the same in each decomposed part, they add only the numerators.

The materials include a Feedback Response Accommodation. The description of this feature states, "Students receive feedback with each item. Most feedback is growth-mindset and whole learner-focused. Additional support is provided if a student gets the item incorrect to help students correct any misconceptions."

5.5 Process Standards Connection

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.5a	All criteria for guidance met.	1/1
5.5b	The guidance was not met due to materials not including a description of how process standards are incorporated, or connected, throughout the learning pathways.	0/2
5.5c	The guidance was not met due to TEKS process standards not being included in each lesson.	0/1
—	**TOTAL**	1/4

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

In the grade 4 lesson "Raise the Roof," the students are presented with a real-life problem to solve (process). They need to build some planters, meaning they need to find the perimeter (content) of the boxes to buy enough wood.

The materials include an "Exact Path: High Quality TEKS-Aligned Assessments" document with a table displaying the TEKS Mathematics Coverage within Exact Path for each grade level. The following TEKS alignment data is shown: grade 3, 98 percent, grade 4, 98 percent, and grade 5, 97 percent.

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

The materials do not include a description of how process standards are incorporated and connected throughout the learning pathways.

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

The materials include an Exact Path Correlation to the *TEKS Guide*, which provides a TEKS standards reference, including the activity type, audience, citation, URL, page(s), and location; however, the materials do not include an overview of the TEKS process standards in each lesson.

The materials include the TEKS process standards incorporated within the learning pathways; however, lesson materials do not clearly outline how the standards are incorporated into each lesson. The examples in the evidence guides could not be identified in specific lesson materials. The *TEKS Guide* provides an overview of lesson components that include process standards, but individual lessons do not identify where the process standards are specifically addressed.

The materials do not include an overview of the TEKS process standards incorporated into each lesson. For example, in grade 4, the standard is listed only in the Domain: Algebra & Expressions introduction.

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 support students in justifying that there can be multiple ways to solve problems and complete tasks.	2/3
6.1c	All criteria for guidance met.	3/3
—	**TOTAL**	8/9

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

In the grade 4 lesson practice "Light Up the Cosmos," students are figuring out which factor pairs make up a number. When the student gets the problem wrong, the program prompts the student to try again while giving them information that will help them solve the problem. This encourages students to think mathematically and persevere through solving problems.

The materials include the video lesson and student practice activity, "Clubhouse Cleanup," where the materials break down the concept of solving multi-step word problems into visual and verbal explanations, followed by interactive questions that prompt the student to apply their own understanding and persevere through problem solving.

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

In the Lesson Idea "Multiplication," the students are presented with a problem and asked to solve it independently. Then, they are asked to share their work with a partner and to explain your problem-solving process. This supports students in understanding that there are multiple ways to solve a problem and helping them to explain their work.

The materials include the Lesson Idea "Multi-Step Word Problems," which presents students with word problems and equations using letters to represent unknown numbers. Students determine what number would represent the unknown letter to make the equation true and then are prompted to discuss how the equation may be rewritten in different ways with the unknown in different positions. However, while the materials ask students to explain their strategies, they do not provide enough guidance for justifying that multiple strategies can be valid. This limits opportunities for students to fully justify and analyze the efficiency of different problem-solving approaches.

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.

In the Lesson Idea "Units of Measurement," students solve a mathematical problem with a partner. They are required to write down how they solved the problem, including the processes and steps they took.

The materials include the Lesson Idea "Solve Word Problems Involving Adding and Subtracting Fractions" that provides solving word problems by adding and subtracting fractions, then participate in an in-class extension activity where pairs of students work together to write a word problem that requires addition or subtraction of fractions. Students are prompted to discuss the steps they used to solve each problem.

6.2 Facilitating Productive Struggle

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.2a	The materials do not support educators in guiding students to share and reflect on their problem-solving approaches, including arguments.	4/6
6.2b	All criteria for guidance met.	4/4
—	**TOTAL**	8/10

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

In the grade 4 Lesson Idea "Multiplication," students are presented with a problem and asked to solve it independently. Then, they are asked to share their work with a partner and to "explain your problem-solving process." This supports students in explaining and justifying their work. However, the materials do not include questions or prompts that educators can use to guide students in reflecting on their problem-solving approaches.

The materials include the "Comparing Fractions and Mixed Numbers" Mini-Lesson, which provides guidance to support students as they reflect on problem-solving approaches including explanations and justifications. The mini-lesson asks students, "How would you write 3/2 as a mixed number?" The guidance asks students to explain and justify how they arrived at their answer. However, the materials do not include questions or prompts that educators can use to guide students in reflecting on their problem-solving approaches or arguments.

The materials include the Lesson Idea "Factors and Multiples," which provides guidance to support students as they reflect on problem-solving approaches including explanations and justifications; however, the materials do not provide guidance on arguments. The Advanced Learner activity encourages students to use any strategy that they think will work to solve the problem and explain their thinking in a paragraph. Then, join the whole group to discuss their answers.

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

The digital platform provides automated hints and explanations when students make errors. For example, in the grade 4 practice Fraction Break Down, if the student incorrectly adds the fractions, the prompt states, "Not quite. To find the missing fraction, look at the shaded parts in the tape diagram and the fraction that is given."

The grade 4 Lesson Idea "Solve Word Problems Involving Adding and Subtracting Fractions" includes an Observe and Respond component that provides guidance to support educators in providing feedback based on student responses and anticipated misconceptions. For example, the lesson states, "if a student

changes the denominator when adding or subtracting," "then remind students of the meaning of 'denominator.' Use models to show that adding or subtracting does not change the total parts of the whole."

The Lesson Idea "Solving Word Problems with Fraction Multiplication" has a section called Observe and Respond, which provides "If and Then" statements to assist the teacher with incorrect answers and misconceptions.