

#### Edmentum, Inc.

Supplemental English Mathematics, 3 Exact Path Mathematics–Grade 3

Supplemental	9781641032582	Digital	Adaptive
MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC

#### **Rating Overview**

TEKS SCORE	TEKS BREAKOUTS	ERROR CORRECTIONS	SUITABILITY	SUITABILITY	PUBLIC FEEDBACK
	ATTEMPTED	(IMRA Reviewers)	NONCOMPLIANCE	EXCELLENCE	(COUNT)
100%	49	2	Flags Not in Report	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)	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 a rationale for learning paths across grade	4/5
1.10	levels (vertical alignment).	<del>4</del> /3
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 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 with recommendations for universal and targeted intervention.

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(s).	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 grade 3 skill/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 materials include the definition and intended purpose for the types of instructional assessments. The materials describe diagnostic assessments as evidence-based, computer-adaptive tests that provide information about the strengths and needs of individual students, classrooms, schools, and districts in math.

The materials explain benchmarks as "fixed-form assessments designed to provide information about the strengths and needs of individual students, classrooms, schools, and districts. These assessments are given periodically throughout a school year to establish baseline achievement data and measure progress toward a standard or set of academic standards and goals."

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 include guidance for how to administer the diagnostic assessments, including tips on the testing environment, as well as what to say to prepare the students for the upcoming diagnostic.

The materials include a student-facing video that explains why they are taking the test, how to navigate, and how the questions are administered.

The materials include Test Administration Guidelines for teacher guidance before, during, and finishing testing, including time guidelines for both directions and assessments. The guidelines state five minutes for directions and 30–45 minutes for assessment for grades 3–5.

## 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 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 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 contain guidance for educators to print and administer assessments based on individual student's 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.

Diagnostic assessments included TEKS-aligned questions from grades 2–5 with varying complexity levels. For example, a grade 3 diagnostic assessment included questions related to understanding and extending number patterns, analyzing, extending, and describing patterns, and evaluating multistep numerical expressions.

### 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 several formative assessments that have varying levels of complexity. For example, in the assignment Opposite Operations, the student has to identify missing numbers in equations, manipulate those equations, then apply that knowledge to word problems.

The materials include a variety of TEKS-aligned formative assessments, for example, the Priority Skills Lesson: "Understand and Extend Number Patterns," includes three practices and a mastery quiz.

student's learning path according to performance. For example, five items selected from an item pool measure one skill at a time.	The materials include an explanation of frequent progress checks to measure skill mastery and adapt a
	student's learning path according to performance. For example, five items selected from an item pool

#### 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. For example, the Struggling Learner Option component provides procedural steps for teachers to support students struggling with understanding multiplication. The guidance provides steps including snap cubes, write repeated addition problems, students build the addition problem, complete models after that the teacher explains repeated addition and how to construct arrays. Repeat this process with other problems until students understand the connection between repeated addition and multiplication.

The material includes explicit educator guidance for lessons or activities scaffolded for students who have not reached proficiency in prerequisite or grade-level concepts and skills. For example, the teacher support materials include multiplication and division and provide clear lesson objectives, warm-ups, materials needed, procedures, practices, and differentiated learner options for advanced and struggling students.

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

The materials include Lesson Ideas resources where the academic vocabulary is listed for each lesson. The *Teacher Resource Manual* suggests that educators may choose to teach the vocabulary words in advance of the lesson. All online lessons include a link to a dictionary in the top left-hand corner. While going through the lesson, the student can access the dictionary to look up unfamiliar words.

In grade 3, the Lesson Idea materials include explicit guidance for embedded supports for developing academic vocabulary and unfamiliar references in text. For example, in the Lesson Idea "Number Sentences Resource," teachers are guided through a think-aloud activity that models academic vocabulary and the use of manipulatives to build and reinforce unfamiliar 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 Priority Skills Lessons with a component titled, Advanced Learner Option and Extension Activities, that provides the teacher ideas for enrichment activities such as creating games, story problems, and riddles related to the lesson content.

The material includes guidance for enrichment and extension activities for students who have demonstrated proficiency in grade-level and above-grade-level content and skills. For example, the Lesson Idea for dimensional shapes includes procedures for advanced learners classifying quadrilaterals activities.

## 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, which provide teachers with various ways that students can show their knowledge of a skill. In the grade 3 Lesson Idea "Model Multiplication and Division," the students will look at different models, use task cards, and complete a worksheet.

The materials provide the Lesson Idea "Real World Problems" guidance, which provides options and support for students to demonstrate understanding of mathematical concepts in various ways, such as create a chart/visual organizer, students write their own real-world problem that involves one step underneath the problem, draw a picture that represents the story in their problem and write out the operation needed to answer the problem and solve it.

#### 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.

In grade 3 Lesson Idea "Model Multiplication and Division," the Procedure component includes steps and prompts for teachers to connect repeated addition to multiplication. For example, step 1 of the Procedure directs teachers to have students look at the models from the Warm-Up Activity and introduce the term "repeated addition." Make sure students understand why the models represent repeated addition—the same number repeatedly added. Tell students that the mathematical operation multiplication is defined as repeated addition, and today they will learn how to write repeated addition problems as multiplication problems.

In grade 3, the Lesson Idea resource includes teacher guidance to build knowledge by activating prior knowledge. For example, in the "Number Patterns" lesson, the teacher identifies number patterns out loud while students skip count. In the main lesson, the teacher is directed to reference the learning from the warm-up and use those examples to explain the difference between increasing and decreasing number patterns. Another example is the "Rounding Numbers" lesson, where the warm-up guides students to call upon real-world examples. The main lesson builds on this knowledge using the teaching points model.

### 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.

Adaptive materials adjust the level of difficulty of the student's Learning Path based on the student's responses to the lessons. Students receive immediate feedback and are routed to prerequisite skills

when needed. Educators can access students' progress and see which lessons they are not mastering. The program provides Lesson Ideas with intervention strategies, including whole-group, small-group, and individual activities with teacher guidance.

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.

The material includes multi-tiered intervention methods for various types of practice and structures and educator guidance to support effective implementation. For example, in grade 3, the Lesson Idea "Number Sentences" begins with a warm-up, followed by a whole-group activity, and independent practice. The lesson ends in a closing activity to check for understanding.

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

In the Lesson Idea "Model Multiplication and Division," the materials offer an Advanced Learning Activity that requires students to take the lesson a step further by completing a cut-and-glue activity, as well as Extension Activities that have students draw their arrays and play a dice-rolling game.

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 includes differentiation procedures for advanced learners and extension activities for further enrichment.

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

The Lesson Idea "Multiplication and Division Properties" materials suggest that teachers use a red/yellow/green reflection. In this activity, students complete a reflection on the lesson, and based on their reflections, the teacher can then pull students who are still struggling.

The materials include a Teacher Homepage guidance document that provides specific strategies for supporting and providing feedback to students in each of the following categories: Needs Attention, May Need Support, and Deserve Recognition. Ideas for what teachers might "see" prompts teachers on what to think about, and provides ideas for how teachers can "take action" to support students in each category.

Lesson materials include prompts and guidance to support timely feedback during lesson delivery. For example, in the "Capacity and Mass" lesson, teachers have the opportunity to formatively assess students and provide feedback using the index card activity in the Warm-Up and the whiteboard activity in the primary lesson.

#### 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
	The material includes increasingly more academic language (at least one	
3.3b	level of language proficiency), but does not include increasingly more	1/4
	academic language for one, two, or more additional levels.	
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 as seen in "A Treehouse of Cards," where there is support for L1 learners that includes creating wall charts, focusing on vocabulary, and allowing students to use a dictionary in their native language to help clarify vocabulary.

The ELL Learning Tips offer suggestions for the L1 learner within lessons, and the material recommends that a student be provided a dictionary and look up the unfamiliar words in the lesson.

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 support educators in assisting ELL with explicit vocabulary instruction on key terms, an English dictionary, and background knowledge that students need to complete the content successfully. Lesson Ideas support educators in assisting English language learners by providing ELL Teaching Tips. These include key vocabulary words, support provided through a visual organizer, and ideas for partner work.

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.

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 "Capacity and Mass" resource, teachers are guided to structure individual work into a teacher-led task with a small set of students or the whole class, and then complete the struggling learner activity as a group to provide students with additional support.

## 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 Lesson Idea "Division with Fractions," where students work in partners to practice their oral discourse of the academic vocabulary. The materials suggest instructors write the step-by-step instructions on the board so English language learners can follow along. This helps students visualize the steps to increase their comprehension.

The materials include Lesson Idea "Capacity and Mass," where the academic vocabulary words capacity and mass are pre-taught and discussed prior to the lesson to help build students' background knowledge of these terms. The materials suggest guided small group work with the teacher to give added support with the academic vocabulary. Finally, students are encouraged to use a bilingual dictionary to help translate words from their native language to English. The students are asked to write a paragraph using the academic words they have learned throughout the lesson.

In grade 3, the Lesson Idea materials include designated lesson guidance and ELL Teacher Tips that 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. In the ELL Teacher Tips, academic

vocabulary supports are provided through graphic organizers, 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 problems, for example, in the lesson "Pan of Fraction," the students are first taught what a fraction is, introducing vocabulary with real-life problems. Students then have to apply their knowledge of fraction parts, choosing which model shows the correct fraction, starting with unit fractions on circular models then moving on to other fractions with bar models.

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.

The materials provide practice opportunities that require students to demonstrate depth of understanding aligned to the TEKS. For example, in the lesson "One Stop Hop," students are given the opportunity to practice identifying locations on a number line, and write fractions shown on a number line. Students are then expected to demonstrate their understanding on the mastery quiz by identifying fraction points on a number line using the drawing tool and identifying the fraction that the models represent.

## 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 assignments which, in the program, increase in rigor and complexity as the lessons go on. As students complete lessons and pass the progress checks, they are moved on to increasingly more complex skills. Students progress through the lessons at their own pace and ability levels because the program does not give assignments based on grade-level alone.

The materials include an explanation so that if a student needs a challenge, then teachers can place a student completely above a domain by selecting the last grade level available in the domain and then

select place out of domain as the new skill. Saving changes will create a brand new Learning Path and assign the student new content based on placement and skill progression order.

The materials include a series of lessons which increase in rigor, such as simple single digit multiplication with concrete models to word problems. The materials also include extension activities of Math Journaling with games like finding the factors of a number and another game where they try to explain how division and subtraction are related by using a calculator and tally marks.

#### 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 include students learning fractions on a number line, connecting to a previous lesson on fractions using area models, and reviewing vocabulary words like numerator, and denominator.

The materials include guided practice with square models divided, shaded, and labeled with the fraction name, then prompts the teacher to draw two number lines and explain that fractions are equivalent if they are on the same point on a number line.

## 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 an area assignment, requiring students to utilize previous knowledge and understanding of arrays and multiplication to solve for the area of a rectangle. For example, number five of the assignment asks students, "What is the area of a rectangle?" when given a picture of a rectangle created with eight rows and six columns. Students must then understand they can solve for areas using the information they know about arrays, repeated addition, and multiplication.

The materials include students learning fractions and ratios by beginning with understanding fractions using a number line, followed by recognizing equivalent fractions using area models, and then recognizing equivalent fractions using number lines.

## 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 the Lesson Idea "Model Multiplication and Division," the instructor will start by reviewing repeated addition and connect it to division in the lesson. "Tell students that the mathematical operation multiplication is defined as repeated addition, and today they will learn how to write repeated addition problems as multiplication problems."

The materials do not include making 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.

In the Lesson Idea "Understanding Multiplication as an Array," the tutorial guides students on how to interpret and analyze an array model, asking students, "How many rows are in this array? How many columns are in this array? What multiplication problem matches this array?" Lesson Idea "Area," the students interpret different models to determine the area of each model. They also create their own models based on a given area.

In the Lesson Idea "Multiplication or Division Equations" provides students with the following guided practice, "Ask students, 'How can we solve this equation and find the number that the question mark represents? How many groups will we make if we divide 20 counters so that there are 4 counters in each group?' Model the equation using counters and have students copy the model with their counters. 'If we replace the question mark with the number 5, is the equation true?' Allow time for students to think and share their ideas."

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

The materials provide an opportunity to create pictorial models, for example, in Lesson Idea "Shape Partitions," students are prompted to select real-world objects from the classroom or home, draw each object, and divide into equal halves, thirds, fourths, fifths, or sixths. Students are prompted to write a real-world scenario about dividing an object into equal parts and sharing among friends, then drawing a scene that describes their story.

The materials outline tasks that provide students with the opportunity to create concrete models and pictorial representations to represent mathematical situations. In the "2-Dimensional Shapes" Lesson Idea resource, students are directed to draw 2-dimensional real-world quadrilateral shapes from the classroom and then label each shape with as many correct names as possible.

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

The materials include the Lesson Idea "Two-Step Real World Problems," where students are prompted to write their own two-step real-world problems including all four operations somewhere in the five problems. When students finish, they will switch papers with a partner and solve each other's problems.

The materials include the "Express Whole Numbers as Fractions" Lesson Idea resource, allowing early finishers to create their own problems about writing whole numbers as fractions and equivalent fractions. They can add visual models to their problems.

The materials include the "Graphs" Lesson Idea resource; students are directed to use the pictographs they created in the Guided Practice Activity to make new pictographs that have a different key and scale.

#### 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 Lesson Idea "Number Sentences," the students play a game to practice their multiplication facts and division facts, which helps promote automaticity and fluency as they try to get the problems right promptly.

The materials provide Disco Robot online practice, where students are prompted to answer 90 problems and display fluency with basic multiplication and division facts.

In grade 3, materials provide the addition and subtraction lesson with an independent practice worksheet. Bionic Boogie allows students to build fluency and automaticity by practicing adding and subtracting one- and two-digit numbers from three-digit numbers.

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

In the Lesson Idea "Bionic Boogie," the materials provide the students with fact families to solve addition and subtraction problems. By solving one problem, students can use fact families to rearrange the numbers to help them figure out the answer, allowing students to choose which problem is easiest for them to solve for efficiency, flexibility, and accuracy.

In grade 3, students' practice materials provide the Solve Problems Involving Elapsed Time activity. The Trail Time practice activity allows students to practice efficient, flexible, and accurate strategies for determining elapsed time using number lines, addition, and subtraction.

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

In grade 3, materials include the Lesson Idea "Multiplication and Division Properties." The students evaluate multiplication and division expressions to determine if the order of the numbers affects the answer. They sort the problems into two sets: Order Matters and Order Does Not Matter. By doing this

activity, the students learn efficiency, flexibility, and accuracy in solving multiplication and division problems.

Grade 3 lesson materials provide the Hour and Minutes Lesson Idea activity. During the main lesson, students are given visual representations of clocks and asked to evaluate and determine elapsed time. The teacher is guided to give strategies to students, like using counting by fives to find elapsed time in minutes or using counting by ones to find elapsed time in hours; the teacher guidance helps students with efficiency, flexibility, and accuracy.

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

In the Lesson Idea "Model Multiplication and Division," the materials begin by reviewing repeated addition. The educator then says students will use the repeated addition strategy to help them solve multiplication problems. By relating these two methods together, the materials show how multiplication is more efficient at representing problems than repeated addition.

Grade 3 lesson materials contain the "Graphs" Lesson Idea activity, in which students represent data with tally marks. In the lesson progression, instruction highlights how to describe the same data using pictographs for greater efficiency.

Lesson materials contain the "Perimeters" Lesson Idea activity. Students physically represent the perimeter of a space by standing and moving. Next, they represent the perimeter by creating a drawing. Finally, they calculate the perimeter on guided and independent practice without creating their own drawings, which leads to efficiency in solving perimeter problems.

#### 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 Lesson Idea "Represent Equivalent Fractions Using Number Lines" includes an overview and lesson objectives. The two lesson objectives are Students will understand that two fractions are equivalent if they are on the same point on a number line and Students will find and generate simple equivalent fractions. These objectives represent the transition between the conceptual and procedural emphasis of the TEKS.

The materials explicitly state how the TEKS conceptual and procedural emphasis are addressed. For example, the Lesson Idea "Perimeter" explains how students conceptually explore the perimeter by tracing shapes and objects with yarn and/or a measuring tape before transitioning to adding all the side lengths in the independent practice. Another example for grade 3 is Lesson Idea "Fractions," which explains how students will conceptually explore fractions on a number line by drawing and shading fraction bars on a number line before they transition to labeling given points on a number line in the independent practice.

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

In the Lesson Idea "Model Multiplication and Division," the students use number cubes to represent repeated addition problems (concrete models), draw arrays to represent repeated addition problems, and pictorial representations. They also create multiplication problems related to repeated addition problems (abstract models).

In the Lesson Idea "Number Patterns," students use counters or beans to represent concrete models of patterns. They must also color in a hundred chart to represent a pictorial model and end with an abstract model by filling out missing numbers in a pattern.

The materials include the Lesson Idea "Number Sentences," which involves building mathematical problems with counters and index cards, creating real-world drawings to find the unknown number, and solving numerical expressions to discover the unknown value. All of these connect to concrete and pictorial representations.

## 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. For example, in the "Capacity" Lesson Idea resource, students are guided through abstract representations of capacity using benchmark objects. Additional Learner supports allow for the extension and application of learning to bring the abstract to concrete using a balanced scale and opportunities for explanation through writing tasks.

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 "Area" Lesson Idea Resource, students connect to abstract models through prior knowledge in the warm-up activity and then expand into creating a concrete model representing the area using colored tiles. Additional Learner supports allow for the extension and application of learning through partner expansion and definition.

#### 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 Lesson Idea "A Treehouse of Cards," the materials provide visuals to help students develop academic vocabulary. To understand the terms multiplication and product, the materials show five groups with three birds in each group. The program then relates that problem to the standard algorithm,  $5 \times 3 = 15$ .

In the Lesson Idea "Shape Partitions," students use geometric shapes to explore fractions as any part of a number, group, or whole. Using models, students use the academic language: fraction, shape, partition, halves, thirds, fourths, fifths, and sixths to describe a fraction.

In the Lesson Idea "2-Dimensional Shapes," students explore quadrilaterals and their properties using geometric shapes. Using models, students use the academic language: classify, quadrilateral, 2-dimensional, square, rectangle, rhombus, parallelogram, trapezoid to identify similar and different properties. Students then create a visual flipbook to outline each quadrilateral and its defining characteristics.

## 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 Lesson Idea "Fractions", students learn how to name fractions correctly. For the lesson, the teacher discusses how to name a fraction based on a point on a number line and then goes around the room, asking students to individually name halves. The students also play a game with their peers to correctly name fractions based on a visual. They have to use correct academic vocabulary to name the fraction, or they will lose their turn.

The Lesson Idea "2-Dimensional Shapes" provides vocabulary such as *classify*, *quadrilateral*, *two-dimensional*, *square*, *rectangle*, *rhombus*, *parallelogram*, *trapezoid*, and *models* to create a flipbook describing quadrilaterals and their properties. The educator is provided with prompts to lead a discussion about the properties as the students record the information in the flipbook.

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

In the Practice: Education Kitty, after reviewing key geometry terms, students must choose descriptions that correctly correspond to the shape provided. This promotes correct mathematical language as it allows students to see how they should mathematically name these shapes.

In the Lesson Idea "Number Sentences," educators use guiding questions to prompt students to justify their answers using mathematical vocabulary when considering number sentences and opposite operations. For example, the Warm-Up prompt includes, Ask students what they know about opposite operations. Elicit responses from the students, ensuring they know that addition and subtraction are opposite operations and multiplication and division are opposite operations. The materials include a think-aloud where the educator models how to use academic vocabulary. After the think-aloud, the materials provide questioning strategies to engage students in academic discourse, such as "How many counters are in each group?"

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

In Lesson Idea "Compare Fractions," students play a game with peers in which they have to identify the greater fraction and explain why it is the greater fraction. They lose a point if they cannot correctly explain why they chose the greater fraction. This game encourages students to hear and use mathematical language with peers.

The materials include Lesson Idea "Express Whole Numbers as Fractions," which prompts early finishers to create their own problems about writing whole numbers as fractions and equivalent fractions, adding visual models to their problems, and allowing students to exchange problems to solve and encourage mathematical conversations among peers.

The materials include Lesson Idea "Model Multiplication and Division," where the teacher introduces the term "repeated addition." "Ensure students understand why the models represent repeated addition—the exact number is added repeatedly. The teacher will then put students in pairs and give each pair a set of pre-cut Guided Practice Cards. Have students spread the cards on their desks and separate the problem cards from the model cards. Students should look at the models and problems and make matches. Check for understanding while students work on making matches."

## 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 Lesson Idea "Understand Fractions Using a Number Line" with an Observe and Response section, using "If a student . . ." and "then" statements, which guide anticipating

misconceptions and addressing inaccuracies. For example, if a student counts the number of marks on the number line instead of the number of parts, then count the number of parts with the student, and point out that the number line needs parts between 0 and 1 corresponding to the fraction's denominator.

The materials include a Feedback Response Accommodation for students. 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.

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; grade 5, 97 percent.

The materials include TEKS process standards. For example, in the "Solve 2-Step Real World Problems" Lesson Idea, students have the opportunity to practice the process standard in the main teaching lesson, the guided practice, and the independent practice.

### 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 overview of the TEKS incorporated into each Priority Skills lesson. For each skill, there is a Skill Statement and the corresponding Standard; however, the materials do not include an overview of the TEKS process standards in each lesson.

The materials include the TEKS process standards shown to be incorporated within the learning pathways; however, lesson materials do not clearly outline how the standards are incorporated into each lesson. Examples within 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 3, the Standard(s) are listed in the introduction of the Domain: Algebra & Expressions only.

#### 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 Lesson Practice "Portioning at the Pet Shop," students try to figure out which real-world situation would match the given expressions. When students get a question wrong, the program prompts the student with a hint to help them without giving them the right answer. This encourages students to persevere through mathematical problem-solving.

The materials include the Lesson Idea "Capacity and Mass," which provides students the opportunity to think mathematically, persevere through solving problems, and to make sense of mathematics. For example, the in-class activity provides students with objects they can measure or objects with the measurements labeled. Have students measure the objects using the provided measurement tools. Then, have students use the data to write and solve word problems about the measurements.

### 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 "Math at the Movies," students multiply in different ways to get the same answer. "I can group differently and still get the same answer." This supports students in understanding that there is more than one way to solve problems and complete tasks.

The Lesson Idea "Recognize Equivalent Fractions Using Number Lines" includes an equivalent fraction card matching activity where students are prompted to show how their fractions are equivalent on a number line and encouraged to use mathematical vocabulary to explain how they know their fractions are equivalent. 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 "Fractions," students play a game in teams where they have to work with their team to locate and name a fraction on a number line. When done, they present their answer to the class. This game encourages students to do and discuss math with their peers.

In the Lesson Idea "Express Whole Numbers as Fractions," students are prompted to create their own problems about writing whole numbers as fractions and equivalent fractions, adding visual models to their problems. Students may then form pairs or small groups and exchange problems to solve, engaging in mathematical conversations with peers.

The materials include the Lesson Idea "Two-Step Real World Problems," where the main lesson and guided practice activities give students the opportunity to practice the skill of working through two-step problems, and the learner activity gives students the chance to interact with their teacher to practice the skill. The Advanced Learner and Enrichment activity gives the students the chance to write their own problems and have discourse with peers.

#### 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 Lesson Idea "Hours and Minutes," students solve problems involving elapsed time. The materials say, "Finally, discuss the methods they used for finding the elapsed times. Determine which elapsed times are most difficult to calculate and why." Then students discuss how they tackled those elapsed time problems, which supports students to reflect and share their problem-solving approaches. 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 support educators in guiding students to share and reflect on their problem-solving approaches, including explanations and justifications. The materials do not include guidance on arguments: "The teacher will project the following pattern: 4, 8, 6, 10, 8, 12, 10, 14, . . . Discuss with the students that this pattern is neither increasing nor decreasing. Give students a few minutes to discuss the pattern with each other. Then, show students the pattern is add 4, then subtract 2. Lesson materials have students extend the pattern with three more numbers: 12, 16, 14. The teacher can provide independent work with a copy of the Advanced Learner Activity."

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

The materials include the "Understand Fractions Using a Number Line" lesson, where the Observe and Respond section gives teachers guidance to provide explanatory feedback. For example, if a student divides the number line into parts that correspond to the numerator of the fraction, the teacher is directed to remind students that the denominator is the bottom number of a fraction. "Show the fraction 1/3, draw a rectangle on the board, and divide it into three equal parts. Explain that those equal parts represent the denominator, 3. Equate the idea of dividing the shape into 3 parts to dividing the number line into 3 parts."

The materials include the Lesson Idea "Capacity and Mass Word Problems," which provides a section called Observe and Respond. The materials provide "If . . . Then" statements to assist the teacher with facilitating incorrect answers and misconceptions.