Great Minds PBC + Zearn

Supplemental English Mathematics, 1

Math Catalyst Texas + Zearn Math for Texas, Grade 1

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Supplemental	**9798894179025**	**Both Print and Digital**	**Adaptive**

Rating Overview

TEKS SCORE	TEKS BREAKOUTS ATTEMPTED	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
100%	169	3	Flags Not in Report	Not Applicable	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	26 out of 28	93%
2. Progress Monitoring	21 out of 21	100%
3. Supports for All Learners	40 out of 43	93%
4. Depth and Coherence of Key Concepts	16 out of 16	100%
5. Balance of Conceptual and Procedural Understanding	38 out of 38	100%
6. Productive Struggle	19 out of 19	100%

Breakdown by Suitability Noncompliance and Excellence Categories

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

SUITABILITY EXCELLENCE FLAGS BY CATEGORY	IMRA REVIEWERS
Category 2: Alignment with Public Education's Constitutional Goal	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	All criteria for guidance met.	5/5
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**	14/14

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 *Math Catalyst*, the "Alignment Guide" aligns the Texas Essential Knowledge and Skills (TEKS), the learning path for each concept, connects to the TEKS Mathematical Process Standards (MPS), and organizes the English Language Proficiency Standards (ELPS) into a K–3 grouping. The guide also identifies Embedded Supports for Language Proficiency and specifies the locations of these supports for each proficiency level.

In *Zearn Math*, the grade 1 "Course Guide" includes comprehensive alignment tables that clearly map each lesson to the TEKS, ELPS, and TEKS Mathematical Process Standards (MPS), allowing educators to easily identify when and where standards are addressed throughout the year. A visual Progression of Mathematical Concepts chart, spanning Kindergarten through Grade 5, supports vertical alignment by showing how key concepts evolve across grade levels, using color coding to distinguish domains like Whole Numbers, Geometry, and Measurement.

In *Math Catalyst*, while the "Implementation Guide" states, "the sequence of objectives across a concept highlights the horizontal alignment embedded in *Math Catalyst*," there is no explicit explanation of the rationale for learning paths across grade levels (vertical alignment) and within the same grade level (horizontal alignment) as designed in the materials.

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.

In *Math Catalyst*, the materials provide an "Implementation Guide" with usage recommendations and strategies to support effective educator use, including just-in-time supports, advanced learning opportunities, and full-course implementation. The "Implementation Guide" defines the program as "a supplemental instructional resource designed to be used with a Multi-Tiered System of Supports (MTSS)," and clarifies its focus on Tier 2 and Tier 3 instruction delivered outside of Tier 1 core instruction. The guide includes visual representations of this definition, the covered concepts, and their vertical and horizontal alignment.

In *Math Catalyst*, the Program Implementation section provides teachers with practical tools such as Possible Ways to Use Components and Sample Schedules in 15- and 30-minute formats. To support emergent English bilingual learners, the guide offers strategies for setting up center rotations, accompanied by a sample lesson schedule.

In *Zearn Math*, each mission includes an implementation guide with practical recommendations for different classroom contexts; these guides outline how to structure instruction, adapt materials for accessibility, and use optional enrichment activities—such as digital bonuses and discussion prompts—to extend learning.

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

In *Math Catalyst*, the materials include a Concept Diagnostic Assessment, available at the start of each Concept, designed to measure student mastery of the skills in the Concept. The assessment includes a rubric, and each assessment item is labeled with the correlating TEKS for the objectives assessed. The "Implementation Guide" states that the provided rubric is "to help teachers analyze student responses, determine a student's proficiency level and identify skill entry points."

In *Math Catalyst*, the materials include a "Strand by Grade: Scope and Sequence" and an "Implementation Guide" used as a TEKS correlation guide. The "Implementation Guide" directs educators, under Determining Intervention Needs for Students, to administer a district- or school-selected screening tool and analyze the resulting data to determine next steps. These assessments, combined with the Concept Diagnostic Assessment, provide data that can be used to inform instruction and provide timely intervention.

In *Math Catalyst*, the Concept Diagnostic Assessment guides educators to specific objectives within the Concept of the materials. For example, in the grade 1 "Concept Diagnostic Assessment: Conceptual Subitizing Within 10," the materials direct educators to consider several statements when making "instructional decisions about skill entry points based on the data collected from the Concept Diagnostic

Assessment, such as "Can the student see groups of up to 5 objects as smaller recognizable quantities that can be composed to determine the total? (Objective 1)," "Can the student see groups of up to 7 objects as smaller recognizable quantities that can be composed to determine the total? (Objective 2)," and "Can the student see groups of up to 10 objects as smaller recognizable quantities that can be composed to determine the total? (Objective 3)."

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

In *Math Catalyst*, the materials include protocols to help teachers internalize units. The "Implementation Guide" offers guidance on Concept Internalization and includes guiding questions that support teachers in using the three components of the materials. The Progress Check section asks, "What does proficiency look like with the content of this concept?" For example, in grade 1, the "Progress Check: Compare and Order Numbers to 120" component encourages teachers to make instructional decisions using data they collect with the "Progress Check Tool."

In *Math Catalyst*, the "Concept Guide" outlines teacher and student materials, suggests preparation strategies, and explains how to address student misconceptions. It also includes illustrations and step-by-step actions for both teachers and students. For example, in the grade 1 "Concept Guide: Compare and Order Numbers to 120, Addressing Student Misconceptions," the materials instruct teachers to "Encourage students to use place value charts to represent numbers." Teachers are prompted to support students by asking the provided guiding questions.

In *Zearn Math*, each "Grade 1 Mission" includes a comprehensive Mission Overview that provides a conceptual summary of the unit, outlines standards and objectives, and breaks down the progression of topics with explanations of how current learning connects to prior and future content, supporting teacher internalization of the unit's learning goals. Teacher lesson materials offer detailed topic-level guidance within each Mission Overview, including examples of visual models and instructional strategies (e.g., number bonds, straw models), enabling teachers to anticipate student responses and effectively plan for conceptual development across a unit.

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

In *Zearn Math*, the materials include Admin Reports that provide instructional leaders with real-time data at the school, grade, and classroom levels, including metrics such as student login rates, lesson completion, usage minutes, and Tower Alerts, enabling administrators to monitor implementation, celebrate successes, and target support.

In *Zearn Math*, resources such as the "Classroom Walk-Through Guide and District and School Lead Playbooks" equip instructional leaders with practical tools to monitor instruction, set expectations, and foster meaningful conversations with educators. The "District and School Lead Playbooks" offer step-by-

step guidance on preparing, launching, and sustaining *Zearn Math*. They include checklists, training videos, communication templates, and scheduling aids, empowering leaders to build effective support systems, promote teacher and student success, and continuously refine implementation across school years.

In *Math Catalyst*, the materials include an "Implementation Guide" that instructional leaders can use to support effective program implementation. This guide outlines the program's structure, offers suggestions for using each component, and provides a sample schedule. Additionally, the "Concept Guide" lists the teacher and student materials, recommended preparations, and key considerations for instruction.

1.2 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	The materials do not include detailed lesson plans with learning objectives or assessment resources aligned with the ELPS.	5/7
1.2b	All criteria for guidance met.	5/5
1.2c	All criteria for guidance met.	2/2
—	**TOTAL**	12/14

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.

In *Math Catalyst*, the materials include ten-minute lesson plans with clear objectives, time frames, summaries, differentiation strategies, and progress monitoring tools. Each "Concept Guide" lists required materials, preparation tips, supports for addressing misconceptions, language scaffolds, and family math pages. For example, the grade one "Concept Guide: Compare and Order Numbers to 120" includes Progress Checks, Mini Lessons, Manipulatives, Templates, and Student Pages for Objectives 1–4.

In *Math Catalyst*, the assessments are directly aligned with TEKS and increase in complexity across objectives. In grade one, the Progress Check begins with comparing numbers using place value and ends with ordering numbers to 120 on an open number line. These assessments align with TEKS 1.2E and 1.2F.

In *Math Catalyst*, teachers track progress using tools like the Observational Data Recording Sheet and informal notes. Lessons incorporate ELPS-aligned tasks involving listening, speaking, reading, and writing. However, the materials do not include assessment resources or learning objectives explicitly aligned to the ELPS.

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.

In *Zearn Math*, the materials include comprehensive Mission Overviews that outline key concepts and learning progressions aligned to the TEKS. Each mission clearly defines objectives that build foundational understanding and prepare students for future mathematical concepts.

In *Zearn Math*, suggested time frames for each component of the teacher-led lesson materials are found in the "Course Guide." This is designed to help teachers plan and pace small-group instruction more efficiently and implement lessons with confidence.

In *Zearn Math*, each mission includes assessment keys that identify the specific TEKS standards addressed and where they appear in the lesson sequence. The assessments also feature a table outlining the ELPS objectives, with each row of the rubric aligned to specific ELPS goals. This comprehensive approach enables educators to evaluate how student responses demonstrate progress in both content mastery and language development.

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

In *Math Catalyst*, the materials contain support in both English and Spanish for each unit for families to use at home to support learning. For example, each concept has a Family Math letter for families available in both languages. This letter states the objective, explains the objective, and then provides simple practice for home. The letter presents illustrations, sample questions, and correct student answers.

In *Math Catalyst*, the Family Math letter presents direct support for students at home using academic vocabulary in both languages. For example, in the kindergarten "Concept Guide" for "Early Numeracy: Perceptual Subitizing within 5," the Family Math letter reads, "Your student is working on perceptual subitizing within 5. Perceptual subitizing involves instantly recognizing the total of a small group of objects without counting them." The letter ends with sample questions, correct answers, and illustrations of the objective.

In *Zearn Math*, Family Materials are provided for each mission, offering overviews of the unit and its topics, along with explanations of key terms and models students will encounter. The Family Materials include sample problems and practical ideas—such as games, questions, and everyday activities—that families can use to support their child's math learning at home.

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	The materials do not include printable versions of digital assessments, nor do they include the enabling or disabling of text-to-speech features, content and language supports, or calculators.	Not Scored
2.1d	All criteria for guidance met.	4/4
2.1e	All criteria for guidance met.	4/4
—	**TOTAL**	12/12

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

In *Math Catalyst*, the materials define various instructional assessments and their purposes. The "Implementation Guide" describes Core Math Assessments as formative and summative tools for measuring student proficiency in specific skills and concepts, useful for identifying intervention needs. It also presents the Pause and Monitor Tool as a way for students to reflect on and track their progress.

In *Math Catalyst*, according to the "Implementation Guide," the Analyze Student Progress section in Concept Mini Lessons includes questions for informally assessing student proficiency on current objectives. It also offers guidance on using the Observational Data Recording Sheet to document performance and make instructional notes during any lesson component. Additionally, the Progress Check Tool serves as both a pre- and post-assessment, with a rubric to evaluate student responses and determine proficiency.

In *Zearn Math*, the materials define and explain the intended purpose of various instructional assessments across lesson and mission levels. These include Lesson Checkpoints—low-stakes, formative assessments embedded in digital lessons that provide immediate, scaffolded support—and the Tower of Power, a scaffolded, mastery-based assessment that ensures students have internalized key concepts before progressing in their digital sequence.

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

In *Zearn Math*, materials include detailed teacher guidance to support consistent and accurate administration of Mission-Level Assessments. Scripts are provided with specific language for teachers to

use, along with instructions for translating for emergent bilingual students, managing student unresponsiveness, and taking detailed observation notes to capture student understanding.

In *Zearn Math*, assessment materials, including answer keys and teacher guides, support consistent administration practices by providing preparation steps, timing suggestions, and examples of expected student behavior. Clear procedures are outlined for scoring and interpreting student responses, including directions on how to adjust scoring based on the level of support provided during the assessment. For example, if a student requires significant prompting, the materials instruct teachers to lower the demonstrated level of understanding, ensuring results reflect independent performance.

In *Math Catalyst*, each lesson's "Concept Guide" outlines materials and preparation steps for administering the Progress Check and Pause and Monitor Tool. Each Progress Check includes detailed steps for administration, such as a teacher script, specific actions, and expected student responses to ensure consistency. For instance, the grade 1 "Conceptual Subitizing Within 10" assessment includes an overview, guiding questions, and a Progression Toward Proficiency Rubric to evaluate understanding.

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.

In *Math Catalyst*, the materials neither include digital assessments, nor offer printable versions or accommodations such as text-to-speech, content and language supports, or calculators that educators can enable or disable to support individual students.

In *Zearn Math*, digital assessments include on-screen read-aloud capability, where students can click an audio icon to hear text read aloud. However, there is no feature for educators to enable or disable this support for individual students, limiting the ability to personalize accommodations based on specific student needs.

In *Zearn Math*, the materials do not include a built-in calculator feature, nor do they offer options for educators to customize (enable/disable) content and language supports. This limits teachers' ability to tailor digital assessments to support students' specific needs.

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

In *Math Catalyst*, the materials include a Concept Diagnostic Assessment at the beginning of each Concept with TEKS-aligned tasks or questions and interactive item types with varying complexity levels. The "Implementation Guide" states, "The Concept Diagnostic Assessment can be used before or during instruction to collect data about a student's current understanding, skills, strengths, and areas for growth. It enables educators to monitor students' progress, identify learning gaps, and adapt instruction to meet students' needs."

In *Math Catalyst*, each Concept Diagnostic Assessment includes a rubric that ranks student proficiency from "Not Yet Proficient," "Partially Proficient," and "Proficient," and lists the TEKS for each objective assessed in the Concept. Tasks and questions within each assessment are sequenced from simple to complex, and include various tasks and responses that allow students to demonstrate progression toward mastery. Teachers are directed to end the assessment if the student is unable to answer the first questions and try again after the student receives more instruction.

In *Math Catalyst*, in the grade 1 "Concept Diagnostic Assessment: Conceptual Subitizing Within 10," students begin by verbally responding to a task before recording their own answer using a writing tool and the included student assessment page.

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

In *Math Catalyst*, the materials include an Analyze Student Progress section in each Concept Mini Lesson with questions for teachers to use to informally monitor students' progress. Questions include Monitor, which assesses students in the moment, and Questions to Advance Student Thinking, which extends the objectives in the lesson for teachers to informally assess depth of learning.

In *Zearn Math*, the materials offer a range of formative assessments aligned to the TEKS, including digital lesson checkpoints, scaffolded Towers of Power, Exit Tickets, Mission-Level Assessments, and selected response practice. A TEKS alignment chart is included to help teachers connect assessment items to standards within each mission.

In *Zearn Math*, the assessments feature interactive item types with varying complexity levels, including multiple choice, text entry, drag-and-drop, open numeric entry, and the use of digital manipulatives. These formats offer diverse ways for students to demonstrate understanding and help teachers gather detailed diagnostic information.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	All criteria for guidance met.	3/3
2.2b	All criteria for guidance met.	1/1
2.2c	All criteria for guidance met.	2/2
2.2d	All criteria for guidance met.	2/2
2.2e	All criteria for guidance met.	1/1
—	**TOTAL**	9/9

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

In *Zearn Math*, the materials provide rationales for correct answers in all Selected Response Practice. For example, in Mission 1, Question 1 informs teachers of the problem type and details students' understanding by selecting the correct answer.

In *Zearn Math*, the materials provide rationales for each incorrect response as well. For example, in Mission 1, the key clarifies why an answer is incorrect and what misconceptions may be reflected in each incorrect response. This provides an opportunity for teachers to better understand where students are in their learning.

In *Math Catalyst*, the materials contain instructional assessments, scoring information, and guidance for interpreting student performance. The materials provide a Progress Toward Proficiency Rubric, which outlines how to assess students' proficiency levels at the end of each unit's Progress Check. The rubric guides teachers in rating students as "Not Yet Proficient," "Partially Proficient," or "Proficient" based on descriptors that progress from simple to complex problems.

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

In *Zearn Math*, the instructional materials include multiple reports and tools—such as the Tower Alerts Report and Progress Reports—that help teachers identify where students are repeatedly struggling. Teachers have the ability to assign lessons, given the alerts regarding challenging topics. These tools provide specific follow-up recommendations, enabling teachers to assign targeted small-group lessons and foundational content based on individual student needs.

In *Zearn Math*, the "Course Guide" and educator dashboard support real-time instructional adjustments by offering visualizations of class and student-level data. Teachers are guided to use this information to

address unfinished learning, reinforce grade-level concepts, and support student progress through small-group instruction and differentiated tasks.

In *Math Catalyst*, the "Implementation Guide" provides direction for using tools such as the Analyze Student Progress section, the Observational Data Recording Sheet, and the Progress Check Tool to respond to performance trends. These tools help track proficiency, record notes during lessons, and analyze student work to determine next steps.

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

In *Math Catalyst*, the materials include tools for teachers to track student progress and growth, as well as tools for students to monitor their own development. One such tool is the Observational Data Recording Sheet, embedded in every concept. This sheet allows teachers to document performance on each objective and make notes during any lesson component, including written practice.

In *Math Catalyst*, the Progress Check Tool is used as a pre- and post-assessment to evaluate proficiency with skills taught in Concept Mini Lessons. It includes a rubric to help teachers analyze responses, celebrate progress, and plan for mastery. Additionally, the Progress Check Tool is used as a pre- and post-assessment to evaluate proficiency with skills taught in Concept Mini Lessons. It includes a rubric to help teachers analyze responses, celebrate progress, and plan for mastery.

In *Zearn Math*, students have access to tracking tools such as the Weekly Goal Tracker, Challenge Tracker, and Digital Badges, which promote accountability and motivation by visually representing lesson completion and goal achievement. The Brainy Challenge further supports goal setting and family engagement.

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.

In *Math Catalyst*, the materials provide prompts and guidance to support educators in conducting frequent checks for understanding at key points throughout each lesson or activity. Teacher Tips in the Application section offer strategies for monitoring progress and differentiating instruction. For example, in grade 1, "Addition: Add Within 100 by Using Mental Strategies," a tip suggests facilitating a small-group activity to informally assess understanding and provide support.

In *Math Catalyst*, each Concept Mini Lesson includes an Analyze Student Progress section with targeted questions to help teachers assess understanding. In the grade 1 "Addition: Add Within 100 by Using Mental Strategies" lesson, teachers monitor learning by asking if students can say the presented number sentence in unit form or if the student can represent a number sentence with cubes and drawings.

In *Math Catalyst*, scripted questions embedded in each Concept Mini Lesson guide teachers in checking for understanding during instruction. For example, in the grade 1 "Addition: Add Within 100 by Using Mental Strategies" lesson, the teacher asks students to write a number sentence to match their drawn representation of a two-digit number and determine the total or sum while explaining how they know.

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

In *Zearn Math*, the digital lessons incorporate multiple checkpoints throughout each lesson to ensure continuous monitoring of student understanding. These frequent checks help identify misconceptions early and provide opportunities for immediate feedback and correction.

In *Zearn Math*, when students encounter challenges, the digital platform offers immediate, integrated support features such as dividing problems into smaller steps, providing digital manipulatives, and delivering targeted guidance. This scaffolded support enables students to progress at their own pace and develop confidence as they work toward independent mastery.

In *Zearn Math*, each lesson concludes with a Tower of Power assessment—a scaffolded, mastery-based task that gradually increases in difficulty while providing decreasing levels of support as students advance. This structure, combined with resources such as Math Chats and interactive videos, enables students to learn at their own pace and receive targeted assistance when necessary.

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	*Math Catalyst*, a static program without digital components, and *Zearn Math* do not include digital materials with accommodations, including text-to-speech, content and language supports, and calculators that educators can enable or disable to support individual students.	0/3
3.1e	All criteria for guidance met.	2/2
—	**TOTAL**	9/12

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.

In *Math Catalyst*, the materials provide explicit guidance for lessons and activities scaffolded for students who have not yet mastered prerequisite or grade-level concepts and skills. According to the Determining Intervention Needs for Students section of the "Implementation Guide," teachers should collect informal data by asking students to explain their thinking during math instruction. Recording classroom observations and student conversations offers an additional data point when identifying appropriate interventions.

In *Math Catalyst*, the Possible Ways to Use Components section in the "Implementation Guide" explains how to incorporate the Concept Mini Lessons. These mini lessons give explicit guidance and activities for students who have not yet reached proficiency. The materials suggest that teachers review or preview concepts in small groups and embed the appropriate content within lessons to strengthen skills.

In *Zearn Math*, the materials include explicit educator guidance for scaffolding during small-group instruction, particularly in Concept Exploration and Fluency Practice, where teachers address misconceptions, provide hands-on modeling, and give immediate feedback. Additionally, the digital components of the program adapt in real time based on student performance, offering step-by-step guidance, targeted hints, video tutorials, and scaffolded support.

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.

In *Math Catalyst*, the materials include explicit educator support for pre-teaching unfamiliar references in text or for developing academic vocabulary. The Development of Academic Mathematical Language of the "Implementation Guide" describes the embedded support for teachers to help students understand and use precise mathematical language, such as using manipulatives and visuals, and following the Language Support notes in Concept Mini Lessons to scaffold vocabulary growth. Further, the materials include Key Terminology cards in each "Concept Guide." The cards include "student-friendly definitions and visual representations that provide a flexible opportunity for pre-teaching and reinforcing of academic mathematical language." Each set of cards can be used as flashcards, portable word walls, and sorting activities.

In *Math Catalyst*, the materials embed support for developing academic vocabulary during instruction. In the lesson "Concept Mini Lessons: Compose, Decompose, and Represent Numbers to 120," Objective 1 begins with students creating the number 23 by linking cubes and saying the number while the teacher explains, "It is important to say 2 tens, not just 2. Tens is the unit. Units tell us what we are counting, like tens or ones. We say the unit so that it is clear what we mean." The teacher then uses place value cards to model the number 23 while saying, "23 is a two-digit number, so it has two places. The digit 2 is in the tens place and tells us that there are 2 tens in the number. The digit 3 is in the one's place and tells us that there are 3 ones in the number."

In *Zearn Math*, the materials provide guidance on incorporating academic vocabulary, using multiple means of action and expression, and engaging in discussions using new terminology. The grade 1 Teacher Lesson Materials note, "Display the new vocabulary terms with images in the classroom alongside other terms from this mission."

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.

In *Math Catalyst*, the "Strand by Grade Scope and Sequence" document shows how concepts build across grades, enabling teachers to identify opportunities for extending learning beyond the current grade level. The "Start here if students can . . ." statements in each Progression of Mini Lesson Objectives chart allow teachers the opportunity to work with students on above-grade-level skills for enrichment or extension. Teachers then use the Solve a Task in the Application activities to promote enrichment through open-ended problem-solving and flexible reasoning.

In *Math Catalyst*, the "Implementation Guide" states that the Practice and Application sections are to "provide enrichment and extension opportunities." Each Practice and Application has a chart with listed

activities, the purpose of the activity, and considerations. These considerations make suggestions on how to modify the activities to meet the needs of the student based on proficiency level.

In *Zearn Math*, the materials offer suggestions for students who demonstrate proficiency in grade-level content and skills. The "Course Guide" indicates that optional practice problems may be used to extend and flexibly reinforce grade-level learning. These resources support problem-solving, conceptual understanding, and connecting mathematical ideas beyond the core digital lesson.

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

In *Math Catalyst*, the materials do not include any digital materials. There are no accommodations, including text-to-speech, content and language support, and calculators that educators can enable or disable to support individual students. In the "Implementation Guide," under the Components section, the materials state, "The Concept Mini Lessons station gives teachers an opportunity to provide direct instruction to small groups of students. The Practice and Application stations can be used flexibly to engage students in aligned practice and enrichment activities."

In *Zearn Math*, the materials do not include accommodations, including text-to-speech, content and language supports, and calculators that educators can enable or disable to support individual students. In grade 1 lessons, prompts are automatically presented with audio support, and text-to-speech functionality is accessible to all students. Additionally, instructional prompts and directions can be replayed using embedded audio buttons.

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.

In *Zearn Math*, the Teacher Lesson Materials include educator guidance on offering options and supports for students to demonstrate their understanding of mathematical concepts in various ways. For example, in Lesson 24, under Multiple Means of Action and Expression, the materials note that "some students may benefit from using manipulatives to create a house instead of drawing," illustrating how students can perform, express, and represent their understanding through concrete models rather than abstract representations.

In *Math Catalyst*, in the "Implementation Guide" under the TEKS Mathematical Process Standards, the materials state, "The TEKS Mathematical Process Standards (MPS) are seamlessly woven into different components of the program." Students use objects, drawings, numeric representations, and precise language to communicate mathematical ideas. In the Application section, students select tools and

techniques to solve problems, and in Concept Mini Lessons, they analyze relationships to connect prior learning to new concepts.

In *Zearn Math*, the Teacher Lesson Materials also provide options to support students in demonstrating understanding through varied approaches. For example, students may use manipulatives, such as attribute blocks, before drawing, or work with a partner to sort data before graphing. The materials emphasize an intentional balance between whole-group and independent practice, ensuring all students have multiple opportunities to represent, engage with, and express their mathematical thinking.

3.2 Instructional Methods

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

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

In *Zearn Math*, Mission 2, Lesson 5, teacher materials include explicit guidance that support teachers in anchoring the big idea of using 10 to solve problems. The teacher note indicates that by drawing a number bond to match the story and drawing a number bond to match the ten-frame drawing, students continue to relate the addition facts of 9 with the addition facts of 10. Drawing number bonds, ten frames, number sentences, and writing statements are all multiple means of representation that help students connect visual, numeric, and conceptual understanding of the problem.

In *Zearn Math*, explicit teacher guidance is provided within the word problem activity in Mission 3, Lesson 10. The teacher note explains that students may activate prior knowledge by using any of the methods to organize data from the previous lessons, and that the representations should make counting and comparing data more accessible. Additionally, the task builds on students' previous lessons on data organization, prompting them to apply familiar methods independently.

In *Zearn Math*, key features through multiple means of representation appear in Mission 4, Lesson 8: "Fluency Practice," where teachers receive a note indicating that this activity provides practice with both proportional (linking cubes) and nonproportional (coins) representations of tens and ones. Students are encouraged to review the connection between place value and adding or subtracting 10 or 1. The activity explicitly supports highlighting and connecting key features of number and place value by making the base-ten structure visible and encouraging students to compare models.

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

In *Math Catalyst*, the materials offer educator guidance for effective instruction using strategies such as "sharing the learning objective with students visually and verbally," which the "Implementation Guide" calls "an essential instructional approach" for supporting students not yet proficient in math. This

practice connects new learning to prior knowledge, introduces terminology, and builds student confidence. Additional strategies, such as choral reading, partner reading, and visual support, enhance understanding.

In *Math Catalyst*, the "Implementation Guide" outlines how to structure instruction through components like Possible Ways to Use Components, Sample Schedules, and Station Rotations. For example, the Concept Mini Lessons station provides small-group instruction, while the Practice and Application stations support aligned practice and enrichment. The Bring Your Own Tech station allows students to complete teacher-selected digital activities related to the concept.

In *Math Catalyst*, under Tiered Instructional Recommendations, the "Implementation Guide" states, "For supplemental support, instruction can be delivered in a small-group setting," and for intensive support, it "can be individualized, adapted, and delivered in a group size that meets the needs of students." *Math Catalyst* offers short, targeted Tier 2 and Tier 3 lessons outside of core instruction. These lessons follow three to four sequenced objectives and use the Progression of Mini Lesson Objectives to address specific student needs.

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

In *Zearn Math*, the materials provide clear, embedded guidance for implementing intervention across instructional settings. Each small-group lesson includes structured components like Fluency Practice, Concept Exploration, Lesson Synthesis, and Exit Tickets, along with prompts and routines (e.g., Turn and Talk, Think-Pair-Share) to support effective delivery and promote student engagement and understanding. Additionally, teachers are guided to use real-time digital lesson data, such as Tower Alert Reports, to identify student needs and determine when to intervene.

In *Math Catalyst*, the materials offer multi-tiered intervention strategies and educator guidance for implementation. In the Possible Ways to Use Components section of the "Implementation Guide," Concept Mini Lessons are recommended for small-group instruction to "review, preview, strengthen skills and concepts," while Practice and Application components can "build stations" or offer direct instruction. Practice Pages support "spaced retrieval, spiral review, and interleaved practice," and Application tasks offer "enrichment and extension opportunities" and help "build fluency and automaticity."

According to the "Implementation Guide," "*Math Catalyst* is a supplemental instructional resource designed to be used within a Multi-Tiered System of Supports (MTSS) to maximize student achievement in mathematics." It supports Tier 2 and Tier 3 instruction through short, targeted lessons delivered outside of core instruction and sequenced across three to four objectives. Lessons can be used in small groups or individualized settings, with Practice and Application activities offering aligned, guided, or independent practice; in grade 1, these are combined into a single Practice and Application component.

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

In *Zearn Math*, the materials include enrichment and extension methods that support various forms of engagement, with clear guidance for educators to implement them effectively. In Mission 3, Lesson 5, the materials provide specific guidance for challenging students who are ready for more advanced measurement tasks. Students are encouraged to measure objects in multiple dimensions and compare the results, promoting higher-order thinking.

In *Math Catalyst*, the materials include enrichment and extension methods that promote varied student engagement, along with implementation guidance for educators. The "Implementation Guide" states, "The Practice and Application stations can be used flexibly to engage students in aligned practice and enrichment activities," allowing them to "work independently, with a partner, or in a small group" to build fluency and automaticity. These components support differentiated instruction through targeted practice.

In *Math Catalyst,* Concept Internalization in the "Implementation Guide" provides guiding questions for planning enrichment and extension across lesson components. In Concept Mini Lessons, teachers are prompted to ask, "What do my students already know? What can they already do? What do they need support with?" Similarly, in Practice and Application and Progress Check, teachers reflect on questions such as, "How do the Practice Pages progress from simple to complex?" and "What does proficiency look like with the content of this concept?"

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

In *Zearn Math*, the Teacher Lesson Materials include prompts to support educators in providing timely feedback during lesson delivery. Throughout Warm-Ups (Fluency Practices), Concept Explorations, and Exit Tickets, multiple prompts are embedded to help teachers gauge student understanding of the content in real time. This guidance enables educators to adjust instruction promptly and support student learning effectively.

In *Zearn Math*, digital lessons include features that provide students with timely, real-time feedback and adaptive support as they work independently through grade-level content. These lessons are designed to maintain rigor while allowing students to progress at their own pace. When students struggle, the system generates a Tower Alerts Report that alerts teachers and recommends specific Foundational Lessons to address gaps in understanding, enabling targeted, just-in-time intervention aligned with core instruction.

In *Zearn Math*, the materials include prompts to support educators in providing timely feedback during lesson delivery through targeted questioning to check for understanding. For example, in Mission 3, Lesson 11: "Concept Exploration," the teacher guides students as they analyze a graph by asking questions like, "What do you notice about this graph that is different from the graphs we used yesterday?

What is similar?" and "How did you figure it out?" These prompts help teachers identify misconceptions and offer timely, specific feedback to support student learning.

3.3 Support for Emergent Bilingual Students

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

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.3a	All criteria for guidance met.	4/4
3.3b	All criteria for guidance met.	4/4
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**	17/17

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.

In *Math Catalyst*, the materials include educator guidance on providing linguistic accommodations for all English language proficiency levels, as outlined by the ELPS. Although the "Implementation Guide" states that "Guidance for supporting EB students in making cross-linguistic connections through oral and written discourse is embedded in the Concept Guide," this guidance is uniform across grades K–2. The materials offer tips for EBs, including differentiated accommodations by proficiency level at the beginning of each concept's Alignment Guide, which supports advancing students toward higher levels of academic language across lesson components.

In *Math Catalyst*, the "Implementation Guide" notes that the "Alignment Guide for each concept includes alignment to the English Language Proficiency Standards and highlights embedded supports for different levels of language proficiency," but these supports are minimal. Most lessons include fewer than one embedded support, which often consists only of gestures or visuals like number cards, and are similar across all lessons. These strategies are limited to beginner and intermediate proficiency and do not address more advanced language needs.

In *Math Catalyst*, the materials include Language Support notes within some Concept Mini Lessons, offering guidance to build vocabulary, comprehension, and background knowledge. However, not every lesson contains this support, and when provided, it typically consists of teacher-modeled phrases and simple sentence frames. These methods primarily assist students at the beginning level of language acquisition and lack scaffolds for students progressing toward advanced proficiency.

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.

In *Zearn Math*, the materials include embedded linguistic accommodations for all language proficiencies, as defined by the ELPS. Found in the Multiple Means notes, supports include sentence frames, modeled vocabulary, and oral language routines.

In *Zearn Math*, the materials include notations for teachers to support language development, particularly for emergent bilingual students. In Mission 5, Lesson 7, teachers are prompted to display new vocabulary terms with images and to include them alongside other terms from the mission. The guidance also suggests that beginning and intermediate emergent bilingual students may benefit from discussing and noting translations of these terms, supporting both content access and academic language growth.

In *Zearn Math*, the materials include embedded linguistic accommodations for beginning and intermediate levels of language proficiency. For example, in Mission 2, Lesson 1, the Multiple Means of Engagement section suggests having students act out number stories to support visualization and comprehension, particularly for beginning and intermediate emergent bilingual students. It also recommends personalizing problems using students' names and familiar contexts.

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

In *Math Catalyst*, the materials include implementation guidance to support educators in effectively using the materials in state-approved bilingual/ESL programs. The Implementation Guide contains support in the "Using Math Catalyst in State-Approved Bilingual/ESL Programs" guidance. A table is presented for educators with the Instructional Model, Recommended Structure, and Recommended Modification available to support educators in their specific program.

In *Math Catalyst*, the "Using Math Catalyst in State-Approved Bilingual/ESL Programs" guidance includes references to the other sources of support available to the teacher. For example, in the row designated as the Transitional Bilingual Early Exit/Late Exit program, educators can use the materials "as designed, allowing the certified bilingual teacher to use materials (Key Terminology, Play a Game, Family Math) creatively to support learning."

In *Zearn Math*, the materials include implementation guidance to support educators in effectively using the materials in state-approved bilingual/ESL programs. Guidance found in the Course Guide outlines how the resource can be flexibly implemented across a variety of models, including dual language, transitional bilingual, ESL pull-out, and ESL content-based. Suggestions for adapting instruction, using digital lessons effectively, and incorporating scaffolds are provided.

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.

In *Math Catalyst*, the materials include guidance to support emergent bilingual students in building academic vocabulary, background knowledge, and making cross-linguistic connections through oral discourse. For example, in "Subtraction: Subtract Within 20," students "Turn and Talk" to explain reasoning, and in "Compose, Decompose, and Represent Numbers to 120, Objective 1," the teacher defines *unit* and uses place value cards to aid understanding. These strategies help build content knowledge but primarily address early language development.

In *Zearn Math*, the materials support cross-linguistic connections by embedding guidance that encourages using students' home languages to deepen conceptual understanding through oral and written discourse. For example, in Mission 3, Lesson 1, students review key math terms in their native languages and identify Spanish-English cognates. Additional support appears in Mission 5, Lessons 1 and 4, where vocabulary is paired with visuals and translated through discussion, and students analyze story problem phrases in both English and their home language.

In *Zearn Math*, the materials include embedded guidance that supports the development of academic vocabulary and increasing comprehension through oral and written discourse. For example, in Mission 1, Lesson 27, students engage in structured partner talk using sentence frames to explain their reasoning, aligned with ELPS expectations. Written supports also appear in Mission 4, Lesson 4, where students write number sentences and *more than* statements to reinforce place value understanding, and in Mission 1, Lesson 17, where sentence frames guide students in composing complete mathematical responses.

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.

In *Math Catalyst*, the materials provide TEKS-aligned practice opportunities that develop conceptual understanding. Each concept includes worksheets, games, and hands-on activities in the Practice and Application section. Students demonstrate understanding by responding to teacher questions and completing structured tasks. For example, in the grade 1 lesson "Early Numeracy: Conceptual Subitizing Within 10," students use printed dot cards and a partner to play How Many?, a game where students say how many dots they see without counting.

In *Zearn Math*, instructional and assessment tasks are aligned to the TEKS and vary in complexity to meet diverse learner needs. Examples include Mid-Mission and End-of-Mission Assessments that require students to explain their reasoning, model with manipulatives, and solve real-world problems using multiple representations, such as drawings, equations, and number sentences.

In *Zearn Math*, students demonstrate their understanding throughout the learning pathways through guided practice, open-ended discussions, and math chats. Teacher guidance encourages probing for reasoning and explanation, supported by rubrics that track progress from minimal to solid reasoning, ensuring that assessments measure conceptual understanding aligned with the TEKS.

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.

In *Zearn Math*, the materials include practice opportunities and scaffolded assessments that build conceptual understanding and align with the TEKS, with tasks that increase in rigor and complexity. Above-grade-level content is integrated into both digital core lessons and optional supports such as Digital Bonuses and teacher-guided extensions. For example, in Mission 5, Lesson 12 digital bonus,

students have an enrichment opportunity to compare halves and fourths, which exceeds the standard and allows students to extend their learning.

In *Zearn Math*, the materials include practice opportunities and scaffolded assessments that build conceptual understanding and align with the TEKS, with tasks that increase in rigor and complexity. For example, Mission 5 supports understanding of teen numbers through decomposition, while the Tower of Power gradually reduces support to help students demonstrate proficiency.

In *Math Catalyst*, instruction is organized into Concept Mini Lessons with hands-on Practice and Application activities for Tier 2 and Tier 3 support. In grade 1, students complete multipart tasks using contextual clues and visuals to practice conceptual subitizing within 10. These activities support real-world application and extend learning within TEKS 1.2A.

4.2 Coherence of Key Concepts

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

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

In *Math Catalyst*, the "Strand by Grade: Scope and Sequence" outlines both horizontal and vertical alignment, showing how concepts build across and within grades. It states, "Concepts and Objectives within each strand build upon each other to form a ladder of mathematical understanding." In grade 1, students progress from Compose 10 through Understand Equality, then transition to Add Within 100 by Using Mental Strategies.

In *Zearn Math*, the instructional materials demonstrate coherence within each grade level by connecting concepts across missions and lessons. Mission Overviews consistently explain how each mission builds on prior knowledge and prepares students for future learning, such as progressing from number composition in Mission 4 to working with teen numbers in Mission 5.

In *Zearn Math*, mission and lesson overviews emphasize conceptual progression across content areas, such as number sense and geometry. For example, students move from understanding simple number relationships to decomposing teen numbers and from identifying basic shapes to classifying two- and three-dimensional figures based on their attributes.

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

In *Zearn Math*, the materials demonstrate clear connections from kindergarten through grade 6 by intentionally building patterns, big ideas, and relationships across grade levels. The scope and sequence outlines how core concepts are introduced, extended, and deepened through a coherent K–8 learning progression. Examples of coherence include place value, multiplication/division, and fractions, each developed systematically across multiple grades.

In *Zearn Math*, specific examples, such as the use of number bonds in kindergarten through grade 2 and the development of place value understanding through the Say Ten method, illustrate how key concepts evolve across grade levels. Overviews within missions explicitly identify how current lessons prepare students for more advanced work in future grades.

In *Zearn Math*, this progression is outlined in overarching documents and reinforced within individual lessons, where prior knowledge is routinely activated and new concepts are presented as part of a continuous mathematical journey. The instructional materials extend patterns of thinking, strengthen connections among concepts, and equip students for success in future grade-level learning.

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 *Zearn Math*, the materials demonstrate coherence across lessons and activities by consistently connecting students' prior knowledge to current and future mathematical learning. In Mission 5, students build on their foundational understandings of basic shapes and partitioning to compose and decompose more complex figures, deepening their understanding of part-whole relationships and applying this knowledge to real-world contexts, such as telling time. This integration of concepts supports both conceptual understanding and procedural fluency, preparing students for future work with fractions and time, in alignment with the TEKS.

In *Zearn Math*, coherence is evident in Mission 2, as students progress from solving problems within 10 to working within 100. The Mission Overview explains how strategies introduced in Mission 1—such as counting on—are extended into new methods, like make ten or use ten as one of the parts. These composition and decomposition strategies build on kindergarten foundations and lead into grade 2 place value work, showing a clear trajectory of learning across grade levels.

In *Zearn Math*, teachers are supported through scripted lesson notes and visual progressions that show how kindergarten content connects to grade 1 and beyond. These resources clarify how early mathematical experiences prepare students for more advanced concepts, ensuring coherence within and across grade levels.

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.

In *Zearn Math*, the materials provide consistent opportunities for spaced retrieval by incorporating fluency practice that revisits previously learned skills at the start of each lesson. These warm-ups reinforce foundational concepts, such as number sense, counting, and part–whole relationships, helping students retain and strengthen their prior knowledge.

In *Zearn Math*, adaptive activities like those found in the Number Gym—such as Make and Break, Number Bond Dash, and Tell the Hidden Number—are designed to reinforce learning from earlier missions while preparing students for upcoming content. These activities connect new and prior concepts through concrete, pictorial, and symbolic representations.

In *Zearn Math*, teacher guidance and lesson overviews emphasize how fluency practice builds coherence over time. By repeatedly engaging with earlier skills such as decompositions, number bonds, and counting strategies, students deepen their understanding and are better equipped for more advanced mathematical learning.

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

In *Zearn Math*, the instructional materials provide consistent interleaved practice opportunities by revisiting previously learned skills and concepts across multiple missions and learning pathways. In Mission 1, students explore composing and decomposing numbers within 10 to solve addition and subtraction problems, and this foundational work is extended in Mission 4, where students decompose and compose two-digit numbers into addition equations, such as expressing 34 as 30 + 4. These activities reflect how earlier number sense is reengaged and applied in more complex contexts.

In *Zearn Math*, the Mission 5 materials connect kindergarten knowledge of shapes to grade 1 geometry by asking students to identify defining attributes of individual shapes, reinforcing and extending prior learning. Similarly, Mission 6 builds on skills such as counting, place value, and number comparison, and integrates them into new tasks, including double strip diagrams, money problems, and equations with tens and ones, demonstrating how earlier concepts are embedded in increasingly advanced problem-solving situations.

In *Zearn Math*, fluency practices further promote interleaved learning by reviewing past content, such as coin identification and skip counting, regardless of the current lesson's topic. Students use concrete tools, such as linking cubes and coin models (dimes and pennies), to simultaneously practice concepts like place value and counting strategies. This intentional integration across lessons—evident in fluency work, problem-solving, and conceptual instruction—supports the development of procedural fluency and conceptual understanding by reinforcing connections among math topics throughout the year.

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 *Zearn Math*, the questions and tasks provide opportunities for students to interpret, analyze, and evaluate models and representations of mathematical concepts, such as when students solve word problems using three addends. Students identify combinations that make ten, group and represent numbers with materials like blocks and strings, and explain their reasoning using number sentences and visual models.

In *Zearn Math*, the materials guide students to evaluate and compare representations through activities such as interpreting picture graphs, identifying defining and nondefining attributes of shapes, and classifying shapes using hands-on tools. These tasks build a deeper understanding as students justify and refine their thinking.

In *Math Catalyst*, the "Implementation Guide" explains that the program balances conceptual understanding and procedural skills through progressively complex Concept Mini Lessons and supporting Practice activities. Application tasks extend learning by having students transfer knowledge to new contexts using tools and strategies of their choice. The TEKS Mathematical Process Standards are integrated throughout as students use objects, drawings, numeric representations, and precise language to build understanding.

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

In *Math Catalyst*, the materials include tasks that prompt students to create concrete and pictorial models of math situations. The "Implementation Guide" highlights the Read–Draw–Write Tool, which uses visuals, prompts, and questions to support problem-solving. Students read the problem, create or adjust drawings as new information is discovered, and write number sentences or equations to represent their thinking.

In *Math Catalyst*, each Concept Mini Lesson provides questions and tasks for students to create models and pictorial representations. For example, in grade 1, "Place Value: Concept Mini Lessons: Compose, Decompose, and Represent Numbers to 120," students use linking cubes, provided images, place value cards, and place value charts to create their own number bonds and pictorial representations of numbers up to 120. By the end of the lesson, students create their own models and pictorial representations to build a number to 120 using an addition sentence.

In *Zearn Math*, the questions and tasks provide opportunities for students to create concrete models to represent mathematical situations. In grade 1, students use tools such as hide zero cards, ten-sticks, and linking cubes to physically model numbers and explore place value concepts like decomposing 17 into 10 and 7. They also build composite shapes and count manipulatives by grouping efficiently, helping solidify abstract ideas through hands-on practice.

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

In *Math Catalyst*, the materials provide opportunities for students to apply conceptual understanding to new contexts through all curriculum components. The "Implementation Guide" states, "The objectives in Concept Mini Lessons progress in complexity and provide opportunities for students to develop conceptual understanding and procedural fluency," while the Practice and Application components help students "solidify" skills and "transfer knowledge to new applications and build fluency."

In *Math Catalyst*, students extend learning in the Practice and Application sections by applying conceptual understanding in new situations. For example, in grade 1, "Addition: Add Within 20," students play "Addition Top It" with the optional support of a number path to 20 and use a deck of cards to create addition sentences, determine the total, and then determine which player has created the larger sum.

In *Zearn Math*, the materials prompt students to use number bonds and drawings to solve story problems, identify unknowns, and connect mathematical representations with real-world examples. Digital and print tasks also encourage students to reflect on the relevance of math concepts, such as part-whole relationships, one more/less, and shape attributes, beyond the classroom.

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 *Zearn Math*, the materials provide tasks designed to build student automaticity and fluency through daily, embedded fluency practice. For example, every grade 1–5 independent digital lesson features Number Gym, an adaptive fluency activity that strengthens foundational number sense. Number Gym activities support students by bridging K–5 math foundations, reinforcing prior skills, and addressing unfinished learning, with students progressing to larger numbers and more challenging tasks as they demonstrate proficiency—promoting automaticity in foundational number sense.

In *Zearn Math*, each lesson Warm-Up includes fluency activities designed to support automaticity, such as in Mission 2, Lesson 1, where teachers guide students to count from 10 to 20 using both the regular and Say Ten ways (e.g., 10, ten 1, 12, ten 3). The activity includes flexible pacing—counting forward or backward—and interactive group participation, helping students develop fluency within the teen number sequence through repeated, engaging practice.

In *Math Catalyst*, the "Implementation Guide" explains, Practice and Application supports fluency-building through "spaced retrieval, spiral review, and interleaved practice," as well as through games. In grade 1 "Place Value: Compose, Decompose, and Represent Numbers to 120," students "identify 1 ten as a unit and represent two-digit numbers as tens and ones, represent two-digit numbers by using standard and expanded forms, represent numbers to 120 by using objects and pictures, [and finally] represent numbers to 120 by using standard and expanded forms" to reinforce TEKS 1.2C by using "objects, pictures, and expanded and standard forms to represent numbers up to 120."

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

In *Zearn Math*, the materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures throughout learning pathways. For example, in Mission 4, Lesson 4, the guided practice digital video presents multiple efficient strategies for solving tens plus ones problems, such as using linking cubes, place value charts, number bonds, expanded form, and writing four related equations. These varied approaches promote procedural flexibility and efficiency.

In *Zearn Math*, the materials in Mission 4, Lesson 3: "Concept Exploration," offer opportunities for students to develop and apply flexible and accurate mathematical procedures throughout their learning experiences. Students interpret two-digit numbers in multiple ways—either as tens and some ones or as all ones. Educator guidance supports this flexible thinking through the use of various tools, including fingers, sticks, and hide zero cards.

In *Math Catalyst*, Concept Mini Lessons include tasks that build procedural fluency through a progression of strategies. For example, in grade 1, "Addition: Count On to Add Within 10," students begin with dice and printed amounts to practice counting on from a number, using their fingers and cards with groups of five, show sets using a number bond, and finally counting on to find the total of an addition expression by using their fingers and a number path. During the Progress Check, students demonstrate procedural accuracy and flexibility by choosing among multiple methods to solve problems.

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

In *Zearn Math*, the materials provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for efficiency, flexibility, and accuracy. For example, throughout grade-level activities, students choose their own strategies to solve problems, explain their approaches to partners, and engage in whole-class discussions to compare and reflect on which strategies were most helpful and why. This process supports students in considering the clarity, accuracy, and efficiency of different solution methods.

In *Math Catalyst*, the materials provide opportunities for students to evaluate mathematical representations, models, strategies, and solutions for efficiency, flexibility, and accuracy. In grade 1, Concept Mini Lessons for "Subtraction: Subtract Within 20," students build representations with linking cubes, find a set of ten, and use a counting path to solve subtraction problems within 20. Students then apply this understanding to subtraction expressions by decomposing a ten number into tens and ones, then subtracting from the ten rather than relying on linking cubes to count sets.

In *Math Catalyst*, the Practice and Application component allows students to evaluate models and strategies independently or with a partner. In grade 1, "Subtraction: Subtract Within 20," students use the Read–Draw–Write process to solve subtraction word problems within 20, recording their work on a whiteboard or the Solve a Problem Recording Page. They solve "take from and take apart" problems, play a subtraction game with a partner, and complete a multipart task involving subtracting a one-digit number from a teen number. These activities reinforce subtraction concepts through multiple representations.

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

In *Zearn Math*, teacher guidance in Mission 4, Lesson 5, and Mission 3, Lesson 8, encourages students to identify and use efficient strategies such as drawing quick tens on place value charts and organizing data into groups (e.g., groups of 5) to support more efficient counting and computation. Discussions prompt students to articulate their reasoning and refine their problem-solving approaches.

In *Math Catalyst*, the materials contain guidance to support students in selecting the most efficient approaches when solving mathematics problems. For example, in the "Implementation Guide" under the About the Read–Draw–Write Tool section, the materials state, "the tool provides visuals, prompts, and questions to remind students how they can approach solving a variety of problems." Students approach problem-solving by carefully reading the problem, breaking it into parts, and using drawings to represent their thinking.

In *Math Catalyst*, the Progression of Mini Lesson Objectives in each concept provides guidance in the progression of approaches to mathematics problems from least to most efficient. For example, in grade 1, "Subtraction: Subtract Within 20," the materials begin with using a number bond to decompose the subtrahend and counting back to 10 by using a number path, with additional support provided by the use of linking cubes. Finally, the student solves subtraction problems by decomposing a teen number as a ten and some ones, then taking away from the ten and adding the remaining parts.

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.

In *Math Catalyst*, the materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed. The "Implementation Guide" states that program components are "structured to balance the development of conceptual understanding with procedural skills," with Concept Mini Lessons building complexity, Practice solidifying understanding, and Application promoting fluency through real-world contexts. This structure ensures students develop a deep understanding while gaining procedural accuracy and flexibility.

In *Zearn Math*, the Progression of Mathematical Concepts and Rationale for Mission Sequence found in the Course Overview explicitly state how the conceptual and procedural emphasis of the TEKS are addressed. These sections outline how key mathematical ideas are intentionally introduced, developed, and extended across missions and grade levels. For example, Mission 1 focuses on building number sense through composing and decomposing numbers within ten, while Mission 2 builds procedural fluency with numbers up to 20 by introducing strategies like making ten and solving multistep problems—laying the foundation for future TEKS-aligned learning.

In *Zearn Math*, the Mission 4 Overview includes opportunities for students to build a deeper understanding of place value by applying number relationships within 40, using knowledge of tens and ones. Through hands-on tools like linking cubes, finger modeling, and coins, students explore counting strategies, expanded form, and decomposing two-digit numbers, reinforcing the concept of ten as a unit and supporting conceptual development aligned with the TEKS.

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

In *Math Catalyst*, the materials include questions and tasks that provide opportunities for students to use concrete models, pictorial representations, and abstract models as required by the TEKS. The "Implementation Guide" describes the Read–Draw–Write Tool as a support for problem solving with visuals, prompts, and questions. Prompts such as "Can I draw something? What can I draw?" encourage students to create, revise, and label visual representations, then write equations and a final answer statement.

In *Zearn Math*, the Mission 2 Overview materials state that students engage in tasks that support the use of pictorial representations and abstract models, as required by the TEKS. In "Topic B," students begin by solving subtraction problems involving 9 and 10 using concrete manipulatives, then transition to drawing pictorial representations and number bonds. This progression supports the development of conceptual understanding by connecting visual models to symbolic reasoning.

In *Zearn Math*, questions and tasks provide opportunities for students to use concrete models, pictorial representations, and abstract models as required by the TEKS. In Mission 2, Lesson 4, students begin with linking cubes to model 9 + 3, then transition to drawing representations on whiteboards using ten-frames, and finally write the corresponding number sentences. This progression supports students in developing a deep understanding of addition by connecting physical, visual, and symbolic 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.

In *Math Catalyst*, the materials support students in connecting and creating concrete and representational models to abstract concepts, as required by the TEKS. The Read–Draw–Write Tool guides students through solving problems using visuals, prompts, and questions that encourage drawing, labeling, writing equations, and forming complete responses. Additionally, the Implementation Guide emphasizes using objects, drawings, and numeric representations to help students analyze relationships and build conceptual understanding in both Concept Mini Lessons and Application tasks.

In *Zearn Math*, 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 Mission 4, Lesson 9, teacher materials provide structured guidance to help students transition from using ten sticks to draw representations and finally compare numbers without visual aids. Teacher prompts encourage students to explain their thinking, such as focusing on the digit in the tens place to compare numbers, fostering a clear connection between concrete models, pictorial representations, and abstract numerical concepts.

In *Zearn Math*, the Mission 4, Lesson 2 teacher materials guide students to use place value charts and manipulatives like ten sticks and cubes to represent numbers such as 17, labeling them as one ten and seven ones. As numbers increase, students transition from using linking cubes and pictorial drawings to relying on place value charts, with teacher prompts supporting the shift from concrete to more abstract representations.

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 *Math Catalyst*, the materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, or other language development strategies using the Read–Draw–Write Tool. For example, the "Implementation Guide" states, "The tool provides visuals, prompts, and questions to remind students how they can approach solving a variety of problems." Prompts include, "Ask, 'Can I draw something?' Then ask, 'What can I draw?' Draw to represent the problem as you reread . . . Label what is known and unknown. Ask, 'What does my drawing show me?' Write number sentences or equations to represent your thinking. Solve. Write a statement that answers the original question."

In *Math Catalyst*, students use manipulatives in the Practice and Application sections of the materials to develop their academic language. For example, in grade 1, "Place Value: Compose, Decompose, and Represent Numbers to 120," students collaborate in pairs to solve a multipart task involving composing, decomposing, and representing numbers up to 120. They use contextual information to support their understanding and apply critical thinking with precise mathematical language to solve three related problems.

In *Zearn Math*, the materials provide opportunities for students to develop academic mathematical language through manipulatives. For instance, in Mission 2, Lesson 19, students use their fingers and a number path to explore subtraction with the term *count on*, and in Mission 5, Lesson 1, students create *open* and *closed* shapes using straws to reinforce geometry vocabulary.

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 *Math Catalyst*, the materials include embedded educator guidance to scaffold and support students' use of precise mathematical vocabulary during communication with peers and teachers. The "Implementation Guide" states, "*Math Catalyst* includes embedded support to help students understand and use precise mathematical language," noting that teachers model precision by restating student

responses and using visuals. Language Support notes in Concept Mini Lessons provide additional scaffolding strategies to develop and reinforce vocabulary.

In *Zearn Math*, the materials offer embedded educator guidance that scaffolds vocabulary development through modeling, sentence frames, and structured peer interactions. In Mission 5, Lesson 3, students describe shapes using attributes, and teachers are encouraged to circulate and note language use. Similarly, in Mission 6, Lesson 9, students use place value language to describe numerical changes, and Turn and Talk routines help them explain their thinking with precision.

In *Zearn Math*, educators are guided to deepen students' academic language by prompting reflection and encouraging precise vocabulary during mathematical discourse. In Mission 3, Lessons 4 and 6, students use tools and comparative terms, such as *longer*, *shorter*, and *about*, to discuss measurement tasks, while teachers support their language use with sentence stems, word banks, and targeted questions to extend vocabulary use during partner conversations.

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

In *Math Catalyst*, the materials include embedded guidance to support student use of appropriate mathematical language and academic vocabulary in discourse. The "Implementation Guide" recommends the Read–Draw–Write Tool, which "provides visuals, prompts, and questions to remind students how they can approach solving a variety of problems." It offers two versions of the tool, advising teachers to "select and print the version appropriate for your students" and to consider laminating it for repeated use throughout the year.

In *Zearn Math*, the materials embed sentence stems and structured routines to support students, including emergent bilinguals, in applying academic math language. For example, in Mission 4, Lesson 10, and Mission 6, Lesson 4, sentence frames such as "___ is greater than" or "is more than ___" help students articulate comparisons using precise language.

In *Zearn Math*, lessons include embedded discourse strategies such as Turn and Talk, Think-Pair-Share, and guided partner conversations. These routines, seen in both Mission 3 and Mission 5, allow students to verbalize reasoning, clarify misunderstandings, and engage with academic language in context. Additionally, teachers are guided to highlight and reinforce terms such as *attribute*, *greater than*, or *centimeter* during instruction.

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

In *Math Catalyst*, the materials include embedded guidance to facilitate mathematical conversations, allowing students to hear, refine, and use math language with peers in Concept Mini Lessons. For example, in grade 1, "Subtract: Subtract Within 100 by Using Mental Strategies," students review the use

of subtracting like units using a number line. The materials state, "We subtracted like units to find 67 − 23. We subtracted the tens, and then we subtracted the ones. We took away 20 first, and then took away 3 more to get 44." Students are then invited to turn and talk with a partner about how they can use the number line to help them subtract like units using mathematical language from the lesson.

In *Math Catalyst*, the materials include Teacher Tips and Language Support in the Concept Mini Lessons to facilitate mathematical conversations. For example, in grade 1, "Addition: Add Within 100 by Using Mental Strategies," the Teacher Tip offers tips to support students in understanding the quantity versus the value of ten-sticks and cubes. The materials state, "Support students by emphasizing the value of each cube stick or cube and counting by tens and ones to find the total." The Language Support offers support for homonyms of mathematical terms. The materials state, "Consider intentionally pairing the term sum with total orally and in writing so students understand the mathematical meaning of the word."

In *Zearn Math*, the materials embed routines like Turn and Talk, Think-Pair-Share, and sentence frames across lessons to encourage students to verbalize math reasoning. For example, in Mission 5, Lesson 3, students describe shapes using their attributes, such as, "It has 6 straight sides and 6 corners." These routines help students hear precise math language from peers and refine their own responses.

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.

In *Math Catalyst*, the 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 through structured teacher guidance. For example, the "Concept Mini Lessons" in each unit include crafted sample dialogues with anticipated student responses, exemplar answers, and strategies for refining or redirecting student thinking.

In *Zearn Math*, the materials include support for redirecting inaccurate student responses. For example, in Mission 4, Lesson 3, the Concept Exploration includes guidance around an inaccurate student response: students naming that 34 is just made of 4 ones, instead of 34 ones or 3 tens and 4 ones. After hearing this inaccurate response, the teacher asks students follow-up questions and prompts them to use their fingers to model the number and correct their understanding.

In *Zearn Math*, the materials include embedded guidance with exemplar responses but do not anticipate a variety of student answers or provide strategies to redirect inaccurate responses. For example, in Mission 2, Lesson 7, during a fluency activity, the materials provide an exemplar response to the equation "9 + 6 = 10 + __" and guide the teacher to have students repeat the correct equation if an incorrect answer is given, but the materials do not include teacher guidance for addressing inaccurate responses.

5.5 Process Standards Connection

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

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

In *Math Catalyst*, the materials include TEKS process standards integrated appropriately into the materials. The Family Math page for each unit contains visual representations of the concepts to be taught, along with information for families. Additionally, in Application, students access the integrated TEKS process standards by using appropriate tools and techniques to solve problems and communicating and justifying their mathematical thinking using various representations.

In *Zearn Math*, the materials integrate the TEKS process standards appropriately into instruction. According to the "Course Guide," each lesson is intentionally designed to embed the TEKS Mathematical Process Standards, providing opportunities for reasoning, modeling, communication, and problem-solving (process). These process standards are incorporated throughout lessons to ensure students engage meaningfully with grade-level mathematics.

In *Zearn Math*, tasks and discussions are structured to promote application of the process standards alongside content skills. For example, in Mission 4, Lesson 7, students use manipulatives and vertical addition strategies (content) to solve problems, then explain (process) each step to a partner. This integrates TEKS 5.1G and 5.1F, as students make and defend connections (process) between concrete models and abstract representations.

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

In *Math Catalyst*, the materials include a description of how process standards are incorporated and connected throughout the learning pathways. For example, the "Implementation Guide" states, "The TEKS Mathematical Process Standards (MPS) are seamlessly woven into different components of the program." Integration of the process standards involves students communicating mathematical ideas using various representations and precise language, selecting appropriate tools and methods to solve problems in Application, and exploring relationships between past and current concepts to deepen their understanding in Concept Mini-Lessons.

In *Math Catalyst*, the "Alignment Guide" for each strand lists the TEKS and the process standards for each concept. For example, the Place Value strand lists process standards 1.C, 1.D, 1.E, 1.G for kindergarten, "Compose, Decompose, and Represent Teen Numbers," process standards 1.A, 1.C, 1.D, 1.E, 1.G for

grade 1, "Compose, Decompose, and Represent Numbers to 120," and process standards 1.A–1.G for grade 2, "Compose, Decompose, and Represent Numbers to 1,200."

In *Zearn Math*, the materials include a description of how process standards are incorporated and connected throughout the learning pathways. In Mission 5, the Overview describes how Process Standard 1E is incorporated throughout the mission. It states that students use representations such as drawings, straws, and cubes to explore shape composition and partitioning, and later apply these visual tools to understand fractions and time. These examples demonstrate how the standard is integrated into multiple contexts to support ongoing development of representational thinking.

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

In *Zearn Math*, the materials include an overview of the TEKS process standards incorporated into each lesson, as outlined in the "Course Guide." A table titled Mathematical Process Standards By Lesson per Mission identifies which process standards are addressed in each lesson. For example, 1.1B is addressed in Mission 4, Lessons 16–18.

In *Zearn Math*, in addition to the "Course Guide," each Mission Overview includes a section called Focus TEKS Process Standards that outlines how individual process standards are integrated. For example, in Mission 4, process standard 1.1B is explained with teacher background detailing how students use structured strategies—such as drawing representations and writing justifying equations—to build reasoning and problem-solving skills.

In *Zearn Math*, the Mission Overviews provide detailed explanations of how process standards are implemented throughout instruction. In Mission 1, the overview describes how 1.1F is addressed by guiding students to analyze relationships between numbers, such as decomposing numbers (e.g., 8 = 5 + 3) and connecting that understanding to flexible addition and subtraction strategies, ensuring a strong conceptual foundation.

6. Productive Struggle

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

6.1 Student Self-Efficacy

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

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

In *Math Catalyst*, the materials provide opportunities for students to think mathematically during Concept Mini Lessons and Questions to Advance Student Thinking. Additionally, the materials provide opportunities for students to persevere through solving problems using the Read–Draw–Write Tool from the "Implementation Guide," which "provides visuals, prompts, and questions to remind students how they can approach solving a variety of problems." Students persevere by reading parts of the problem, asking themselves questions about the problem, creating drawings and representations, labeling the known and unknown, and finally, adding number sentences and statements to their solutions.

In *Zearn Math*, students are encouraged to persevere through multistep and open-ended problems. In Mission 4, Lesson 5, the word problem asks students to solve real-world addition and subtraction tasks within 20 using drawings, words, and number sentences. The lesson builds on previously learned strategies and challenges students to apply their understanding flexibly and independently in multiple ways.

In *Zearn Math*, materials prompt students to make sense of mathematical relationships through visual models and reflection. In Mission 4, Lesson 16, students solve problems using strip diagrams and then engage in partner discussions to explain their thinking. During the Lesson Synthesis, students analyze diagram structures to deepen their understanding of part-whole relationships and mathematical representation.

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

In *Math Catalyst*, the materials support students in understanding that there can be multiple ways to solve problems and complete tasks. For example, in grade 1, Concept Mini Lesson: Addition: Add Within 100 by Using Mental Strategies, the Questions to Advance Student Thinking asks, "How can you represent

the number sentence with cubes or quick tens and ones? Does the total change if you start with the ones first?"

In *Math Catalyst*, the materials support students in explaining that there can be multiple ways to solve problems and complete tasks. For example, in grade 1, Application for "Addition: Add Within 100 by Using Mental Strategies, students explore mental math strategies for addition using number paths, number mats, decks of cards, whiteboards, and markers. In each task, students are invited to share their work with a partner to "share solution paths and make connections between different representations."

In *Zearn Math*, lessons include guided discussions and teacher prompts that require students to justify their chosen strategies. In Mission 4, Lesson 11, students reflect on methods used to compare numbers (e.g., number lines, quick tens, linking cubes) and justify which strategy they found most helpful. In Mission 4, Lesson 17, the Lesson Synthesis guides students to articulate how their strip diagram representations support different but accurate problem-solving approaches, reinforcing that multiple strategies are valid and meaningful.

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 *Math Catalyst*, the materials are designed to require students to make sense of mathematics through multiple opportunities for students to engage in math with peers and educators using the Application. For example, in grade 1, "Subtraction: Subtract Within 100 by Using Mental Strategies," students work in pairs to practice subtraction within 100 by using the Read–Draw–Write Tool, playing a game about compensation, and solving tasks, all while sharing their thinking and problem-solving strategies with their peers.

In *Zearn Math*, students regularly write to represent and communicate mathematical thinking. For instance, in Mission 4, Lesson 10, students write comparison statements using place value charts to compare quantities. In Mission 4, Lesson 4, partners take turns writing number sentences and "more than" statements based on decomposed numbers, allowing them to explore multiple representations of addition in writing.

In *Zearn Math*, dialogue and discussion are embedded throughout the materials to help students make sense of mathematics. In Mission 3, Lesson 20, students explain their subtraction strategies aloud to partners. In Mission 4, Lesson 11, teacher prompts and partner talk are used to compare digits and justify conclusions about place value and relative size, reinforcing understanding through verbal reasoning.

6.2 Facilitating Productive Struggle

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.2a	All criteria for guidance met.	6/6
6.2b	All criteria for guidance met.	4/4
—	**TOTAL**	10/10

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

In *Math Catalyst*, the materials support educators in guiding students to share their problem-solving approaches, including explanations, arguments, and justifications. For example, in grade 1, "Concept Mini Lesson: Addition: Add Within 100 by Using Mental Strategies," students use linking cubes and whiteboards to practice decomposing a two-digit number into tens and ones to add the ones first. Students are encouraged to "turn and talk about how they can break apart one addend to make a simpler problem" while using their linking cubes.

In *Zearn Math*, materials guide educators in helping students reflect on their own approaches to solving problems. In Mission 4, Lesson 17, students are prompted to assess and explain the reasonableness of their solutions and respond to peer feedback. In Mission 4, Lesson 11, students compare strategies for number comparison (e.g., linking cubes, number lines) and explain which was most helpful and why.

In *Zearn Math*, lessons embed opportunities for students to evaluate, explain, and justify their thinking to deepen understanding. In Mission 4, Lesson 3, students respond to mathematical claims and clarify misconceptions (e.g., "Is 2 tens and 9 ones equal to 9?"). In Mission 4, Lesson 14, students use coins to explain place value and justify whether showing nine more will change the ones place.

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

In *Math Catalyst*, the materials include prompts and guidance to support educators in providing explanatory feedback based on anticipated misconceptions; however, the guidance is found at the beginning of the unit rather than in the lessons. For example, in the Concept Guide of grade 1, "Subtraction: Subtract Within 100 by Using Mental Strategies," the common misconception among students is to "subtract the subtrahend from the benchmark number but then subtract the result from the other part instead of adding." Teachers are prompted to use number bonds to show the parts under the minuend and use the linking cubes to subtract the subtrahend from the decomposed minuend.

In *Zearn Math*, the materials include clear prompts and guidance to help educators respond to student responses. In Mission 2, Lesson 1, the teacher is guided to ask follow-up questions such as, "Can we

make ten since it is such a friendly number?" as students solve problems like 9 + 1 + 4. These prompts help teachers extend students' thinking and guide them toward efficient strategies, such as making ten.

In *Zearn Math*, educator guidance is evident in Mission 2, Lesson 2, offering insight into how students may approach a problem differently, such as starting with 8 instead of 2 in the equation 2 + 4 + 8. The teacher is guided to recognize and discuss these strategies with students, reinforcing that the order of addends does not affect the sum. Additionally, the Multiple Means of Engagement section offers support on how addends should be chosen so that students can readily identify partners to ten.