Renaissance Learning, Inc.

Supplemental English Mathematics, 4
Freckle for Math, 4

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Supplemental	**9798998577215**	**Digital**	**Adaptive**

Rating Overview

TEKS SCORE	TEKS BREAKOUTS ATTEMPTED	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
88.37%	86	5	Flags Addressed	Flags in Report	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	12 out of 21	57%
2. Progress Monitoring	17 out of 23	74%
3. Supports for All Learners	22 out of 37	59%
4. Depth and Coherence of Key Concepts	16 out of 16	100%
5. Balance of Conceptual and Procedural Understanding	32 out of 38	84%
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	1	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)	2	0	0

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

IMRA Quality Report

1. Intentional Instructional Design

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

1.1 Course-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.1a	The materials do not include an alignment guide outlining the ELPS, or a rationale for learning paths across grade levels.	3/5
1.1b	All criteria for guidance met.	3/3
1.1c	All criteria for guidance met.	2/2
1.1d	The materials do not include a protocol, or guidance that supports internalization of the lessons.	0/2
1.1e	The materials do not include guidance for instructional leaders to support educators with implementing the materials as designed.	1/2
—	**TOTAL**	9/14

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

The instructional materials provide a structured and standards-based approach by outlining the Texas Essential Knowledge and Skills (TEKS), identifying the concepts covered, and offering a rationale for adaptive learning paths within the same grade level. The Freckle Teacher Dashboard includes a Standards tab where the TEKS are listed by strand and grade level, allowing teachers to locate and reference the standards easily. The materials also include a "Math Usage Recommendation" flyer that explains how the adaptive learning path adjusts based on student performance, supporting horizontal alignment by keeping students within their grade level while personalizing instruction.

The materials do not include an alignment guide outlining the English Language Proficiency Standards (ELPS), or a rationale for how learning paths are designed to progress across grade levels (vertical alignment).

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.

The materials include a "Math Usage Recommendation" flyer located within the Resources tab of the Freckle Teacher Dashboard. The flyer recommends that students in grades 3–12 complete 20 minutes of

practice per day, two times per week. The "Freckle Flyer Usage Recommendations" PDF also explains the different online practice options, such as Focus Skills Practice for students with Star Math assessment scores. This guidance supports educators in planning consistent usage routines that adapt to student performance. Targeted Math Practice worksheets and instructional videos are available within each grade-level TEKS/topic page. These resources serve as strategies for educators to use in various instructional contexts, including just-in-time support. This allows teachers to provide timely, skill-specific interventions aligned to student needs.

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

The materials include an Adaptive Math pathway that personalizes instruction based on diagnostic assessment results. Students are placed at their appropriate level, and instruction adjusts as they progress. Teachers have access to the "Math Levels" report, which provides student performance data by TEKS cluster, including Star Math scores. This supports teachers in identifying areas of need and monitoring progress toward mastery. While a standalone TEKS correlation guide is not provided, the Teacher Dashboard includes embedded TEKS-aligned data. Teachers can click on specific TEKS to view class-level proficiency and assign targeted practice or generate differentiated worksheets.

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

The instructional materials do not meet the criteria for supporting teacher internalization of units. While each Inquiry Based Lesson (IBL) includes an overview that describes the instructional context and purpose—for example, one IBL overview states, "In this lesson, students will use the concepts of area and perimeter to survive and prosper as miners during the California Gold Rush"—this description helps teachers understand the broader instructional goals and real-world context of the lesson, which supports intentional planning and alignment with the focus TEKS. However, the materials lack a structured protocol to guide teachers in internalizing units or lessons. The instructional materials provide partial support for lesson internalization through structured daily objectives within the IBLs. Although each IBL includes daily objectives such as, "Students will be able to explain the concept of perimeter and solve real-world problems," followed by related objectives and a culminating project, these objectives function as a pacing guide rather than a tool for deep lesson preparation. However, the materials do not include a comprehensive, systematic internalization protocol or planning guide to ensure teachers deeply engage with the content and instructional strategies before delivery.

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

The materials include "Math Usage Recommendations" and "Smart Start Help" articles, which provide resources for instructional leaders to support educators with implementing the materials as designed.

For example, the "Math Usage Recommendations" flyer outlines suggested usage by grade band, and the "Smart Start Help" articles include a 60-minute course with modules such as "What is Freckle?", platform tours, an implementation checklist, and a teacher's guide. Additionally, the Administrator Dashboard and Renaissance Next for Leaders provide tools to monitor student progress and performance across topics. The materials do not include guidance for instructional leaders to support educators with implementing the materials as designed. While tools such as the Administrator Dashboard offer data visibility, there is no evidence of structured guidance or protocols to help instructional leaders coach or support teachers in the implementation process.

1.2 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	This guidance is not applicable to the program.	N/A
1.2b	The materials do not include detailed overviews with learning objectives aligned with the ELPS; the materials do not include assessment resources aligned with the ELPS.	3/5
1.2c	The materials do not include family-facing materials in Spanish, and do not provide actionable support for families to support student learning at home.	0/2
—	**TOTAL**	3/7

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

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

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

The materials include detailed overviews with learning objectives aligned with the TEKS, identifying key concepts covered and supporting instructional alignment. The adaptive platform identifies students who are struggling by standard and recommends when to assign prerequisite skills, targeted practice, or reassign the standard. These features support student learning by aligning instruction to TEKS and providing clear objectives based on performance data. TEKS-aligned IBLs build conceptual understanding. These lessons include suggested time frames to help educators plan instruction and ensure adequate time is allocated for concept development.

The materials include a variety of assessment resources, including benchmark assessments, targeted practice, and exit tickets, which are aligned to the TEKS. These assessments allow teachers to monitor student understanding and adjust instruction accordingly. The materials do not include detailed overviews or assessment resources that are aligned to the ELPS.

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

The materials include a "Family Letter" that is available only in English. The "Family Letter" provides families with general information about what students are currently working on, but it does not offer actionable strategies to support student 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	The materials do not include the definition of the types of instructional assessments.	1/2
2.1b	The materials do not include guidance for the consistent administration of instructional assessments.	1/2
2.1c	The materials do not include a calculator tool, or content and language supports that can be enabled or disabled to support individual student needs.	2/4
2.1d	All criteria for guidance met.	4/4
2.1e	All criteria for guidance met.	4/4
—	**TOTAL**	12/16

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

The materials include several assessment options for gathering student data and formative assessment. One assessment included in the materials is the Targeted Practice, which is a formative assessment used to monitor student understanding and adjust content complexity. Educators assign TEKS-aligned content by student and topic to support differentiated instruction. Another assessment option included in the materials is the "Benchmark Assessments," which evaluate students' current level of understanding and guide instructional decisions.

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

The materials support accurate administration of instructional assessments by providing clear descriptions of assessment types and their intended purposes within the Math Content tab and Reports section. Teachers can access student performance data, including scores, time spent, and answer summaries, which helps ensure assessments measure what they are designed to assess. The materials support accurate measurement, but they do not define consistency in administration, such as suggested time limits or step-by-step procedures within the lesson or unit.

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

The program offers accommodations, such as text-to-speech functionality for math practice (excluding Fact Practice). Both the Adaptive Math pathway and Targeted Math Practice are available in printable formats to support students who may struggle with digital content. While the materials support customization of assessments and provide guided practice, hints, and videos when students answer incorrectly, they do not include evidence of a calculator tool that can be enabled or disabled to support individual student needs. The materials include a language setting in the Roster section of the Teacher Dashboard that allows educators to mark students for language support, indicated by an "ES" icon. However, the materials do not include content and language supports, such as rephrasing complex sentences or defining unfamiliar words, that can be enabled or disabled to support individual students.

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

The *Freckle Math Practice Program* includes diagnostic assessments with TEKS-aligned tasks and questions that incorporate multiple interactive item types and span varying levels of cognitive demand. Students engage with formats such as multiple choice, drag-and-drop, text entry, multiselect, and open-ended responses, which appear throughout the Targeted Practice section and Depth of Knowledge (DOK) Challenges. These assessments allow students to demonstrate understanding through more than two unique item types and reflect more than two levels of complexity. The Adaptive Math pathway functions as a diagnostic tool, adjusting in real time to identify mastery and learning gaps. This adaptive feature delivers differentiated, TEKS-aligned instruction and ensures students are assessed at appropriate levels of challenge. Teachers can preview and customize diagnostic items to tailor instruction and address student needs. The materials clearly describe how students interact with content and how teachers manage assessments, supporting instructional decision-making and aligning fully with the expectations of this indicator.

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

The *Freckle Math Practice Program* includes formative assessments with TEKS-aligned tasks and questions that incorporate multiple interactive item types and span varying levels of complexity. Students engage with formats such as multiple choice, drag-and-drop, text entry, multiselect, graphs, and table completion. These formats appear across Adaptive Practice, Targeted Practice, and Benchmark Assessments, allowing students to demonstrate understanding through diverse question types.

The DOK Challenges present real-world problem-solving tasks that reflect more than two levels of cognitive demand. These formative assessments support instructional decision-making by providing

insight into student mastery of grade-level standards. Teachers can preview and customize questions before assigning them, which supports differentiation and instructional flexibility.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	Materials do not include a rationale for each correct, or incorrect, response.	1/3
2.2b	All criteria for guidance met.	1/1
2.2c	All criteria for guidance met.	2/2
2.2d	This guidance is not applicable to the program.	N/A
2.2e	All criteria for guidance met.	1/1
—	**TOTAL**	5/7

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

The materials provide scoring information and performance guidance through adaptive reports such as "Student Goal Setting," "Performance by Standard," and "Math Report Cards." These tools allow teachers to monitor student progress, identify mastery of math domains, and adjust instruction accordingly. The Teacher Dashboard displays immediate assessment results, including student accuracy and selected responses. It supports teachers in interpreting student performance by offering actionable next steps, such as reassigning standards, printing practice materials, or assigning benchmarks based on student outcomes. The materials do not include rationales for correct or incorrect responses. There is no answer key or embedded explanation that clarifies why an answer is correct or incorrect.

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

The Freckle Teacher Dashboard and Performance by Topic report identify trends in student performance such as frequently missed TEKS, and provide tools for reassigning targeted tasks to address those gaps. Adaptive pathways automatically adjust based on assessment results, guiding students through a recommended sequence of tasks aligned to their demonstrated needs. Assignment and assessment reports include direct links to follow-up actions such as reviewing missed questions, reassigning standards, or accessing IBLs, enabling teachers to respond precisely to student performance data.

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

The materials include real-time reports on the Teacher Home page, allowing educators to monitor student progress and growth without running manual reports. The Student Goal Setting report shows each student's goal and their progress status, supporting timely instructional decisions. Students can set and track their own goals using the Student Goal Setting feature, which includes visual progress bars and

weekly goal tracking. These tools help students reflect on their learning and take ownership of their progress. Adaptive practice adjusts to each student's level, and visual indicators show their current standing within a domain. These features promote student engagement and support personal goal setting aligned to learning goals.

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

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

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

The materials include adaptive practice that provides frequent checks for understanding throughout lessons. When students demonstrate mastery, defined as scoring 80 percent or higher, they move forward to the next level of content. When they struggle, the program automatically remediates and adjusts content to support learning, ensuring students receive targeted practice aligned to their needs. The materials include embedded checks for understanding throughout lessons, and the results are captured in real-time reports such as the Performance by Standard report. These reports allow teachers to monitor student progress on specific standards and adjust instruction accordingly, ensuring that misunderstandings are addressed promptly. Instructional supports are embedded in Guided Practice, offering step-by-step examples when students struggle with a concept. These supports help clarify misunderstandings and guide students toward correct solutions. IBLs include built-in opportunities for checking understanding through slideshows and student worksheets. These tools allow teachers to monitor comprehension and adjust instruction during the lesson.

3. Supports for All Learners

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

3.1 Differentiation and Scaffolds

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.1a	All criteria for guidance met.	1/1
3.1b	The materials do not include explicit guidance for pre-teaching academic vocabulary; the materials do not include explicit guidance for pre-teaching supports or embedded supports for unfamiliar references.	1/4
3.1c	All criteria for guidance met.	2/2
3.1d	The materials do not include a built-in calculator, or content and language supports that educators can enable or disable.	1/3
3.1e	All criteria for guidance met.	2/2
—	**TOTAL**	7/12

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

The Targeted Math Practice section of *Freckle Math* provides scaffolded support for grade 4 students who are not yet proficient in key math concepts. When a teacher selects a standard, the program identifies students who need additional support and recommends differentiated practice. These recommendations are visible in the Teacher Dashboard and may include prerequisite skills aligned to the selected standard. When a student struggles with a math concept during Targeted Math Practice, *Freckle Math* may offer a Guided Practice activity. This feature provides a step-by-step example of how to solve a problem similar to the one the student is working on. The student is prompted to answer questions at each step to promote comprehension and reinforce understanding. If a student answers a question incorrectly during Targeted Math Practice, Freckle automatically provides embedded supports tailored to the student's needs. These include hints, instructional videos, and Work With Me features that activate in real time to guide the student through a similar problem. This adaptive support helps reinforce understanding before the student moves on to more complex content. The Teacher Dashboard guides educators by identifying students who need additional support ("student could use more practice at this standard") and recommending differentiated practice, including prerequisite skills. Teachers can preview and assign supports like Guided Practice, instructional videos, and Work With Me features to provide timely remediation.

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

The materials include embedded supports for developing academic vocabulary. Academic terms are underlined within student-facing content, and students can click on the terms to hear or view definitions during both adaptive and teacher-assigned practice. The materials do not provide pre-teaching supports for academic vocabulary. Unfamiliar references appear in the materials without teacher guidance to support student understanding.

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

The materials include IBLs that provide opportunities for students to apply grade-level concepts through real-world projects. Each IBL includes teacher guidance, such as warm-up questions, grouping strategies, and prompts to support student-designed research questions and cross-curricular exploration. After completing IBLs, students may explore related topics further with teacher support to deepen their understanding. These activities are designed for students who have demonstrated proficiency in grade-level content and skills. The adaptive platform allows students to access content above their current grade level based on performance, offering targeted and independent practice in higher-grade domains. The program provides explicit guidance to educators by explaining how student progress determines content level and offering tools, such as performance dashboards, assignment suggestions, and domain mastery indicators. These features help teachers monitor student growth, assign appropriate challenges, and differentiate instruction to maintain engagement for advanced learners. Teachers can assign Depth of Knowledge (DOK) Challenge Questions that promote higher-order thinking and align with above-grade-level standards. Educator guidance includes using these challenges as discussion starters, formative assessments, or exit tickets, and encouraging student reflection and multiple solution strategies.

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

The materials include accommodations, such as text-to-speech, that educators can enable or disable to support individual students. In grades K–5, questions include audio that can be read aloud to students. Teachers can manage this setting through the roster or assignment settings. The materials do not include content and language supports that meet the definition of accommodations. While students can toggle between English and Spanish and access Spanish audio and navigation, these features are general accessibility tools and are not considered formal accommodations. The materials do not include a built-in calculator that educators can enable or disable.

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

The materials provide options for students to demonstrate understanding through IBL slides and projects. These tasks allow students to perform hands-on problem solving, express their thinking through verbal and written responses, and represent their understanding using visual tools, such as graphs and diagrams. Students are given opportunities to choose how they engage with the content, and educators are supported with pacing guidance and suggested prompts to facilitate student exploration. The materials include Guided Practice supports that activate when students struggle during independent math practice. These supports offer scaffolded, step-by-step examples that mirror the problem at hand. Each step prompts students to respond to a guiding question, encouraging them to articulate their reasoning. Additionally, Guided Practice incorporates visual models and instructional supports, enabling students to demonstrate their understanding in multiple ways, through verbal explanation, written response, and visual representation, rather than simply receiving hints. The materials include Constructed Response and DOK tasks that offer students multiple ways to demonstrate understanding. These tasks allow students to choose how they express their reasoning, whether through written explanations, visual models, or real-world applications. Educator guidance supports differentiation by providing varied prompts and scaffolds, enabling students to apply concepts in new contexts while selecting the format that best represents their thinking.

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	All criteria for guidance met.	5/5
3.2b	This guidance is not applicable to the program.	N/A
3.2c	All criteria for guidance met.	3/3
3.2d	All criteria for guidance met.	2/2
3.2e	All criteria for guidance met.	2/2
—	**TOTAL**	12/12

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

The grade 4 *Freckle Math* materials activate prior knowledge through the instructional videos. When students miss a question in the Targeted Practice or on their adaptive pathway, a math video or hint will appear, reminding them of previous learning that will support them in answering the current question. Students may also choose to receive a hint or click on the Teach Me button (when available) to seek help before missing a question.

The materials anchor big ideas in the instructional videos and hints. For example, when students are asked which shape is a quadrilateral, the hints remind them of the definition and provide visual examples of shapes that are and are not quadrilaterals. Reminding students of the attributes that make a quadrilateral anchors this concept for students and helps them develop a deeper understanding.

Each IBL in the program begins with a Number Talk, during which students are encouraged to mentally solve a math problem in as many ways as they can. Then, the teacher facilitates a debrief, during which students share their strategies. Number Talks provide an opportunity to highlight and connect key patterns and relationships found in our number system.

IBLs such as Clean Drinking Water include opportunities for students to connect key patterns, features, and relationships by representing mathematical ideas in multiple ways. In this lesson, students are asked to compare 3/10 and 3/100 by drawing pictures or using other strategies to determine whether the two fractions are equivalent or not. Then, in the discussion at the end of the lesson, questions such as, "The way that. . . explained the solution caused me to change my thinking because . . .," encourage students to compare and evaluate solution strategies, which will further support the connection of key patterns, features, and relationships.

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

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

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

Freckle Math includes multi-tiered intervention methods for various types of practice, including guided, independent, and collaborative. Students independently engage in adaptive and Focus Skills practice, receive step-by-step support through Guided Practice, and collaborate through Peer-to-Peer Math Supports and IBL.

The materials support multiple instructional structures, including whole-group, small-group, and individual learning. Teachers can assign Targeted Practice to students, use Class Grouping reports to form skill-based small groups, and provide adaptive printables for individual or small-group instruction when technology is limited.

The platform provides educator guidance to support the effective implementation of interventions. Reports such as Performance by Topic and Class Grouping offer actionable insights, and articles like "How do students practice 'Focus Skills' in Math and ELA?" confirm that the platform supports differentiated instruction and targeted assignments.

IBLs combine teacher-led instruction with collaborative, project-based learning. These lessons, along with adaptive tools and printable resources, ensure that all students receive the support they need to progress toward mastery.

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

Freckle Math includes enrichment and extension methods through IBLs that promote real-world application of grade-level content. In the "An Archaeological Dig" lesson, students compare fractional lengths of fossils and explain their reasoning, supported by inquiry sheets, teacher prompts, and optional challenge questions.

The platform supports various forms of engagement, including independent, small-group, and collaborative learning. Students can explore advanced-grade-level content through adaptive and targeted practice, while teachers can assign complex tasks or use completed work for error analysis and deeper discussion.

Teachers receive implementation guidance through help articles such as "Using Freckle for Enrichment," which outlines how to use Independent Practice, Targeted Practice, IBLs, and DOK Challenges to extend learning. These resources help differentiate instruction and support high-achieving students.

Freckle allows flexible delivery, including printable and projectable formats for small-group instruction. Teachers can rotate students through tech-based and print-based enrichment activities to meet diverse engagement needs.

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

Freckle Math provides real-time dashboards and reports that allow educators to monitor student progress, accuracy, and pacing during assignments. Reports such as the Performance by Topic, Student Math Levels, and Class Grouping Reports help teachers identify trends and adjust instruction accordingly.

Reflection questions at the end of IBLs, such as "What was the most difficult part of today's inquiry?" offer informal opportunities for teachers to assess understanding.

Targeted Practice provides prompts and guidance for timely feedback, such as hints, instructional videos, asking a peer who performed well for help, or using a step-by-step guided lesson for incorrectly answered questions.

3.3 Support for Emergent Bilingual Students

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

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.3a	This guidance is not applicable to the program.	N/A
3.3b	Materials do not include embedded linguistic accommodations that support multiple levels of English-language proficiency.	0/4
3.3c	Materials do not include implementation guidance to support educators in effectively using the materials in state-approved bilingual/ESL programs.	0/1
3.3d	Materials do not include embedded guidance to support emergent bilingual students in developing academic vocabulary or making cross-linguistic connections through oral or written discourse opportunities, nor in building background knowledge through written discourse.	3/8
3.3e	This guidance is not applicable to the program.	N/A
—	**TOTAL**	3/13

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

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

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

The *Freckle Math* program includes general instructional supports such as hints, videos, and guided practice examples that appear when students struggle during adaptive practice. A help icon in the student app provides access to additional examples, and a speaker icon reads word problems aloud. However, these supports are not differentiated for students at varying levels of English language proficiency. Academic vocabulary is underlined and clickable for definitions, but there is no evidence that these features are systematically designed to scaffold instruction based on language proficiency levels. Sentence stems and tips for emergent bilinguals are generic and repeated across lessons, without

variation or alignment to stages of language development. The materials do not demonstrate embedded, differentiated supports aligned to multiple levels of English language proficiency.

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

The materials do not include implementation guidance to support educators in using the program within state-approved bilingual or ESL settings. While the teacher dashboard allows Spanish language settings and printable materials in English and Spanish, these features are not supported by instructional strategies or guidance aligned to bilingual or ESL models.

There is no evidence of embedded support, such as language objectives, model-specific plans, or professional learning resources tailored to bilingual or ESL instruction.

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.

Materials include embedded guided opportunities to support bilingual students in increasing comprehension through oral and written discourse. Educators implement IBLs in various classroom settings, such as collaborative small groups for students who need to review a concept or advance to a new mathematics concept, according to the Help Article, "How do I use IBLs in my classroom?" Furthermore, according to the Help Article, "How does Freckle support English Language Learners (ELLs) and Spanish-speaking students?" the online materials respond to an individual student's abilities. The students use sentence starters such as "I agree with . . . because . . ." to further increase comprehension during group problem-solving discussions and work.

Materials include embedded guided opportunities to support bilingual students in building background knowledge through oral discourse. Educators implement IBLs in various classroom settings, such as collaborative small groups for students who need to review a concept or advance to a new mathematics concept. Thus, Emergent Bilingual students with similar language proficiency levels and math skills can be grouped to solve real-world problems. Students use oral discourse to build background knowledge during the Develop Question step of the lesson. Students develop questions or use the Suggested Questions slide to discuss prior knowledge and experiences.

IBLs offer guided opportunities for students to collaborate to solve word problems. The students are encouraged to use precise mathematical language when explaining their solution strategies to one another. The Help article, "How do I use IBLs in my classroom?" guides the educator on whole class discussions and mixed groups, small groups, and centers collaboration. The progression of the IBL increases comprehension and builds background knowledge through oral discourse.

Materials do not include embedded guidance to support emergent bilingual students in developing academic vocabulary or making cross-linguistic connections through oral or written discourse opportunities, nor in building background knowledge through written discourse.

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

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

4. Depth and Coherence of Key Concepts

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

4.1 Depth of Key Concepts

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

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

The *Freckle Math* platform embeds TEKS-aligned practice and assessment opportunities throughout learning pathways, including 10-question assignments, exit tickets, and mini tickets. These tasks require students to demonstrate depth of understanding through interactive formats such as multiple-choice, drag-and-drop, and constructed-response prompts. Benchmark assessments and DOK tasks assess students by individual TEKS strands and include conceptual, visual, and situational prompts. These assessments require students to apply knowledge and critical thinking to real-world, standards-aligned tasks. Teachers can assign practice manually or use adaptive learning features that personalize instruction based on student performance data. The Adaptive and Targeted Math Practice pathways adjust to student proficiency levels and include tasks that require students to demonstrate depth of understanding aligned to the TEKS, supporting instructional decision-making and mastery of grade-level content.

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.

Freckle Math provides an adaptive pathway that begins with a domain-specific pre-test and adjusts in real time based on student performance. As students demonstrate mastery, the system increases the rigor and complexity of questions, supporting progression toward and beyond grade-level proficiency in the TEKS. The *Freckle Math* platform includes DOK challenges and enrichment tasks that target DOK 2 and DOK 3 levels. For example, students may be asked to solve multi-step word problems involving fractions (DOK 2) or justify their reasoning when comparing two different solution strategies (DOK 3). These tasks promote higher-order thinking and support students in developing conceptual understanding and application skills necessary for demonstrating grade-level proficiency in the TEKS. Instructional supports, such as guided practice, hints, videos, and academic vocabulary, are embedded throughout adaptive and

targeted practice. These scaffolds help students access rigorous content and extend learning opportunities for students performing at or above grade level.

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.

Freckle Math includes IBLs that promote horizontal coherence by connecting mathematical patterns and relationships across grade levels. In the "Disaster Relief After Hurricane Katrina" lesson, students use operations and data analysis to plan emergency response efforts, building on prior knowledge while preparing for more advanced problem-solving in later grades. *Freckle's* instructional videos and practice tasks reinforce previously taught skills, such as the order of operations, by revisiting them in new contexts. For example, students apply this concept when solving multi-step problems or evaluating expressions with parentheses and exponents, supporting horizontal coherence through repeated application and increasing complexity. *Freckle* supports differentiation by assigning prerequisite skill practice when students struggle with grade-level content. These assignments blend foundational and current-grade skills, allowing students to build necessary background knowledge while continuing with core instruction. This aligns with the indicator's focus on scaffolding and targeted support for all learners.

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

Freckle Math supports vertical coherence in grade 4 through lessons that build on foundational multiplication and place value concepts. For example, when students work on multi-digit multiplication, the program may assign prerequisite practice in place value understanding and repeated addition from earlier grades. This scaffolding ensures students strengthen essential skills while progressing through grade-level content. As students tackle multi-digit multiplication, *Freckle* may assign prerequisite practice on place value understanding and area models from earlier grades. This ensures students can decompose numbers and visualize multiplication strategies, supporting their transition to standard algorithms. In a grade 4 IBL on area and perimeter, students watch a video about designing a school garden. The teacher prompts them to reflect on their understanding of arrays and multiplication from grade 3, which they use to calculate the area of different garden plots.

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.

Freckle Math connects students' prior knowledge of concepts and procedures to current grade-level content through adaptive placement and fluency tools. Students begin each domain with a pre-test and are placed at an appropriate level, ensuring instruction builds on what they already know. In grade 4, *Freckle* links place value and multiplication strategies to future concepts like decimals and area. For example, students who master multi-digit multiplication may be introduced to decimal operations or area/perimeter problems that lay the groundwork for grade 5 measurement and fraction work. IBLs include teacher prompts and extension tasks that explicitly connect current learning to future mathematical concepts and procedures. For example, in a grade 4 IBL on area and perimeter, students reflect on multiplication strategies from grade 3 and apply them to calculate garden plots, preparing them for future work with measurement and geometry in grade 5.

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.

Freckle Math promotes retention and coherence through Fact Practice and IBLs. Fact Practice builds fluency in all operations through ongoing, adaptive review. IBLs span multiple days, revisiting prior skills and culminating in projects that apply previously learned concepts, supporting spaced retrieval across learning pathways. The platform's adaptive and targeted practice features allow students to engage with prerequisite skills when needed. This supports spaced retrieval and reinforces prior learning by integrating it into current assignments.

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

Freckle Math provides adaptive practice that presents a series of problems aligned to the same skill or topic, using varied formats such as visuals, diagrams, and a constructed response. This practice is available both through teacher assignment and student-driven progression. IBLs include a Daily Review component that revisits previously learned skills and concepts. These reviews support distributed practice by embedding retrieval opportunities across multiple days. While adaptive practice adjusts in rigor, it remains within the same domain. Interleaved practice was only observed in the Daily Review portion of IBLs, showing limited, but intentional, use of distributed practice strategies.

5. Balance of Conceptual and Procedural Understanding

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

5.1 Development of Conceptual Understanding

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

5.1a – Questions and tasks provide opportunities for students to interpret, analyze, and evaluate models and representations for mathematical concepts and situations.

The materials include IBLs that provide questions and tasks prompting students to interpret, analyze, and evaluate models and representations of mathematical concepts. These lessons are built around real-world scenarios and include graphs, charts, and data tables that students must work with and explain. In grade 4, the "Water Conservation" lesson presents students with a bar graph showing daily water usage for various activities. Students interpret the graph, compare quantities, and propose conservation strategies based on their analysis, demonstrating their ability to evaluate and justify reasoning using visual data. Students engage in DOK Challenges that include DOK 2 and DOK 3 questions, requiring them to analyze models and justify reasoning. These challenges include tasks such as determining whether a visual representation of a problem is accurate, explaining their thinking, supporting higher-order reasoning, and preparing for state assessments. The Adaptive Math pathway presents students with models and representations tailored to their learning level, encouraging them to interpret and analyze mathematical ideas in context. For example, students may be asked to compare fractions using shaded models or number lines appropriate to their current understanding. *Freckle's* Targeted Practice includes interactive question types (multiple-answer, type-in, drag-and-drop) that allow students to demonstrate understanding in diverse ways, including through interaction with visual models and representations. These formats support students in interpreting and evaluating mathematical concepts beyond traditional multiple-choice formats.

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

In IBLs, students use Inquiry Sheets and slides that prompt them to create pictorial representations to solve real-world problems. For example, in "Working for an Animal Science Magazine", students explain their thinking using visual models with prompts like "How did you figure out the five facts?" These tasks support conceptual understanding through visual reasoning. Students represent mathematical situations throughout their adaptive pathway by creating concrete models using virtual manipulatives, such as place value discs, color tiles, two-color counters, number bonds, and number lines.

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

The materials include IBLs that provide students with opportunities to apply conceptual understanding to new problem situations and contexts. These lessons are structured around real-world scenarios and encourage students to explore, collaborate, and reflect. In grade 4, students engage in a lesson such as "Water Conservation," where they apply their understanding of data interpretation and comparison to analyze a bar graph showing daily water usage. Students use this information to propose conservation strategies, demonstrating their ability to apply math concepts in a meaningful, real-world context. Students engage in DOK Challenges that include DOK 2 and DOK 3 questions, which support the application of conceptual understanding to novel situations. These challenges begin with real-world introductions and ask students to solve problems using reasoning and justification, such as evaluating whether a model accurately represents a multiplication or division situation. The Adaptive Math pathway presents students with tasks tailored to their learning level that require them to apply math concepts in new contexts. For example, students may solve multi-step word problems involving fractions or decimals, reinforcing their conceptual understanding through application. *Freckle's* Targeted Practice and interactive question types (multiple-answer, type-in, drag-and-drop) provide students with varied opportunities to apply their understanding in different formats. These tasks reinforce conceptual understanding by requiring students to transfer knowledge to new and increasingly complex problem types.

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.

Freckle Math provides Fact Practice assignments intentionally designed to build student fluency and automaticity. Students engage in untimed practice across all operations and progress by scoring 100 percent in three consecutive sessions, supporting repeated and accurate recall of math facts.

The platform includes a "Fact Practice" report that tracks student performance by operation and accuracy. This allows teachers to monitor progress and ensure students develop the automaticity needed to complete grade-level mathematical tasks.

Teachers can assign targeted practice that is aligned with grade-level skills and standards. This feature helps students build automaticity by focusing on essential content through repeated, intentional practice.

Students receive real-time feedback during Fact Practice, which reinforces correct responses and supports quick, accurate recall. This immediate feedback loop is essential for developing both fluency and automaticity.

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

Freckle Math provides Adaptive and Targeted Practice, which supports the development of efficient, flexible, and accurate mathematical procedures. Students receive guided support when they struggle, including worked examples and interactive steps that help them learn and apply procedures effectively.

IBLs include Number Talks that prompt students to solve problems using multiple strategies. These opportunities encourage flexibility and efficiency by allowing students to explore different approaches and share their reasoning with peers. Teachers can assign practice by domain or standard, giving students repeated exposure to grade-level expectations. This supports procedural accuracy and efficiency through consistent practice and reinforcement. The platform provides immediate feedback during practice, helping students identify errors and try alternative strategies. This real-time guidance supports the development of accurate and flexible problem-solving skills.

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

Freckle Math provides opportunities for students to evaluate mathematical representations, models, strategies, and solutions through Adaptive and Targeted Practice. Students work independently within domains and use different methods and models to improve their efficiency and accuracy in problem solving. Instructional videos available during independent practice demonstrate multiple strategies for solving problems. These videos help students evaluate and understand alternative approaches to mathematical tasks. IBLs include structured discussion prompts that guide students in evaluating peer solutions for accuracy, flexibility, and efficiency. Sentence starters such as "I solved it differently than . . ." and "The way that . . . explained . . ." support reflective thinking and comparison of strategies. DOK challenges require students to analyze and evaluate mathematical methods and representations. For example, students identify errors in a peer's solution and explain how to correct them, reinforcing their ability to assess the efficiency and accuracy of different approaches.

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

Freckle Math guides students in selecting increasingly efficient approaches through DOK activities. These tasks present problems in multiple ways, encouraging students to compare strategies and refine their problem-solving methods. IBLs include structured opportunities for students to share and reflect on different strategies. For example, in the "Taking Public Transportation" scenario, students use division to discover how many people will fit on one bus and one train. At the end of the lesson, students discuss which strategies worked best and why, promoting strategic thinking and efficiency. Instructional videos and guided practice examples offer step-by-step support that helps students recognize and apply more efficient methods. Hints and walkthroughs embedded in practice activities reinforce this guidance during independent work. Group work and reflection prompts in IBLs encourage students to explain their thinking and evaluate the efficiency of their approaches. These discussions help students build confidence in selecting effective and efficient strategies.

5.3 Balance of Conceptual Understanding and Procedural Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.3a	Materials do not explicitly state how the conceptual or procedural emphasis of the TEKS is addressed.	0/2
5.3b	All criteria for guidance met.	3/3
5.3c	Materials do not include supports for students in defining and explaining concrete models to abstract concepts.	5/6
—	**TOTAL**	8/11

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

The materials support conceptual understanding by providing virtual manipulatives and visual models within the digital platform. These tools help students explore mathematical ideas and build meaning. However, the materials do not explicitly explain how these tools connect to the conceptual emphasis of the TEKS. The materials support procedural understanding by offering repeated practice with efficient procedures and algorithms. Despite this, the lessons do not clearly articulate how this practice aligns with the procedural expectations of the TEKS or provide instructional guidance that clarifies the balance between conceptual and procedural learning.

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

In grade 4, *Freckle Math* prompts students to use fraction towers to decompose and add fractions with the same denominator. This task supports concrete understanding and prepares students to transition to more abstract reasoning.

Students use pictorial models to represent the same fraction problem visually. They then write abstract equations to match their drawings, reinforcing the connection between visual reasoning and symbolic representation.

In the grade 4 IBL, "The Fantastic Foxes," students decompose fractions in multiple ways across three days. On Day 3, students apply their understanding to a relay race project, using visual models and equations to show how runners share a total distance of 10⅜ miles. This real-world task supports conceptual understanding through concrete, pictorial, and abstract representations aligned to TEKS 4.3B.

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

The materials include supports for students to connect and create representational models to abstract mathematical concepts. In the grade 4 DOK questions, students work with input-output tables and visual patterns to identify and explain number relationships, helping them build connections between visual models and symbolic reasoning. Instructional videos guide students in using representational models, such as tables and number lines, to explain relative sizes of measurement units. These tasks support defining and explaining representational models of abstract concepts. Students also engage with visual representations of multiplication and number patterns, using them to create and explain abstract equations. The materials do not include supports for students to define or explain their thinking when using concrete models to abstract concepts.

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 grade 4, the "Studying Bee Hives" lesson includes visual aids such as diagrams and manipulatives. Students use academic mathematical language, including terms like vertices, sides, parallel, perpendicular, and right angle, to describe geometric properties. Sentence stems such as "I agree with . . . because . . ." and "I solved it differently because . . ." support students in articulating their reasoning using precise vocabulary. IBLs prompt students to engage in daily math discussions using structured sentence stems. Teacher slides include prompts such as "I agree with . . . because . . ." and "I solved it differently because . . .". Students apply sentence stems from the "Studying Bee Hives" slideshow, such as "I solved it differently because . . .", to explain their reasoning and compare geometric properties. This supports the use of academic mathematical language in both written and oral responses.

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 grade 4, the "Studying Bee Hives" lesson includes scaffolded opportunities for students to use academic mathematical vocabulary, such as vertices, sides, parallel, perpendicular, and right angle, during peer discussions and writing tasks. Sentence starters like "I solved it differently because . . ." are embedded in the slideshow to guide students in expressing their reasoning and comparing strategies with classmates. The adaptive math platform supports vocabulary development through guided practice. When students encounter underlined terms, they can click or hover to access definitions through text or audio, reinforcing vocabulary in context. *Freckle's* Guided Practice feature supports students' use of academic vocabulary in context. When a student answers a question incorrectly, the program activates step-by-step guidance. For example, in a perimeter lesson, students first see the definition of perimeter, then receive a visual prompt describing how to identify it, and finally answer the question: "Which image has just the perimeter shaded?" This sequence reinforces vocabulary and conceptual understanding through scaffolded support. The "Studying Bee Hives" lesson includes sentence starters, think-pair-share routines, and writing prompts that support students in using academic vocabulary when communicating with peers and educators. For example, after completing the inquiry sheet, students use prompts like

"The way that . . .explained the solution caused me to change my thinking because . . ." to reflect on peer strategies and express their reasoning using precise mathematical language.

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

IBL sheets and slides scaffold and support students in applying academic vocabulary through structured written discourse. In "The Gold Rush," students respond to prompts like "What are we trying to answer?" and record their thinking before beginning the inquiry.

Lesson slides extend students' use of academic vocabulary by providing sentence stems that prompt them to explain their thinking and reasoning. For example, students use prompts like "I think this strategy works because . . ." to communicate mathematical ideas using precise language during peer discussions and written responses.

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

IBL slides and inquiry sheets scaffold and support students in hearing and using academic mathematical language during peer discussions. In "Opening a Pizza Shop," students respond to prompts such as "What are we trying to answer?" and use sentence frames like "I agree with . . . because . . ." to explain their thinking. Teacher-facing materials include embedded guidance to facilitate mathematical conversations. Slides like "Group Spokesperson Presents Solution" and educator prompts such as "Which pizza is the most profitable?" help students engage in structured discourse using precise vocabulary. While the materials support students in hearing and recognizing mathematical language during discourse, they do not include embedded guidance that helps students refine and use academic vocabulary in their own communication with peers and educators.

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.

IBL lessons include daily solution sheets that provide exemplar student responses, visuals, and pictorial models. In "Taking Public Transportation," students solve division problems and compare costs, with modeled answers showing accurate strategies and reasoning.

The adaptive math platform supports and redirects inaccurate responses through embedded hints, videos, and tools. When students answer incorrectly, the system highlights misconceptions and offers targeted feedback to guide them toward a correct solution.

Freckle's Guided Practice feature engages students in step-by-step examples that define key terms and model strategies. These supports help students revise their thinking and build conceptual understanding in real time.

5.5 Process Standards Connection

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.5a	All criteria for guidance met.	1/1
5.5b	The materials do not include a description of how process standards are incorporated and connected throughout the learning pathways.	0/2
5.5c	Materials do not include an overview of the TEKS process standards incorporated into each lesson.	0/1
—	**TOTAL**	1/4

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

In grade 4, the Targeted DOK Practice includes a garden planning project that prompts students to apply area and perimeter concepts. The task requires students to apply strategies and justify their selections, aligning with TEKS 4.1B (use a problem-solving model) and 4.1G (display, explain, and justify mathematical ideas).

The IBLs guide students to analyze information, formulate plans, determine solutions, justify their answers, and evaluate the reasonableness of their solutions. These steps reflect TEKS 4.1B (problem-solving model) and 4.1G (justification). The lessons also prompt students to select appropriate tools and techniques, such as diagrams, estimation, and number sense, aligning with TEKS 4.1C (select tools, techniques, and methods as appropriate).

Freckle's DOK Challenges embed the TEKS process standards through real-world scenarios. For example, in a perimeter challenge, students help "Meggie the Zookeeper" calculate fencing needs for animal enclosures. This task supports TEKS 4.1A (apply mathematics to problems arising in everyday life) and 4.1G (justify mathematical ideas using precise language).

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

Freckle materials include tasks that align with the TEKS process standards, such as applying mathematics to real-world problems, justifying reasoning, and selecting appropriate tools. For example, students engage in projects like garden planning or perimeter challenges that require them to apply strategies and explain their thinking, aligning with standards such as 4.1A, 4.1B, and 4.1G.

While these tasks reflect the use of process standards within individual lessons, the materials do not include a description of how the process standards are incorporated throughout the learning pathways or how they are connected across lessons. There is no clear guidance for educators on how these standards build over time or link between units, which limits the visibility of a cohesive progression.

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

IBLs include overviews that list the TEKS content standards and describe the lesson activities. In some cases, the tasks align with the TEKS process standards such as 4.1B (use a problem-solving model) and 4.1G (justify mathematical ideas), as students analyze problems, select strategies, and explain their reasoning. However, the lesson overviews do not explicitly describe how the TEKS process standards are incorporated into each lesson. There is no consistent guidance showing how these standards are embedded or connected across the learning pathway, which limits visibility into how students are supported in developing process skills over time.

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.

Targeted Math Assignments allow teachers to select grade 4 TEKS and assign 10-question sets that include multi-step word problems involving concepts like equivalent fractions and multi-digit multiplication. These assignments support students in applying mathematical reasoning and persevering through problem solving. IBLs present real-world scenarios, such as managing a pizza shop, which require students to make sense of grade-level math concepts, represent their thinking, and revise strategies through discussion. For example, in the lesson "Pizza Shop Profits," students analyze an ingredient order form to calculate the cost per pizza by dividing decimal values. They must determine which ingredients are most cost-effective and which to avoid to maximize profit. This task encourages students to apply division with decimals, interpret data in a meaningful context, and justify their decisions through mathematical reasoning and peer discussion. Adaptive Math Practice includes features such as Guided Practice, Hints, and automated feedback that address misconceptions (e.g., dividing to find equivalent fractions), helping students re-engage with problems and build conceptual understanding without being given direct answers.

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

IBLs like "The Gold Rush" support students in understanding and justifying that there can be multiple ways to solve problems by incorporating group presentations and structured class discussions. After solving a problem collaboratively, one group is selected to present their solution and explain their reasoning. The class then engages in a discussion using sentence stems such as, "I solved it differently than . . . because . . ." and "The way that . . . explained the solution caused me to change my thinking because . . ." The Group Spokesperson activities at the end of each IBL guide students to explain their solutions and participate in class discussions using sentence stems such as "I solved it differently than . . . because . . ." and "The way that . . . explained the solution caused me to change my thinking because . . ." These structured discussions help students justify their thinking and reflect on alternative strategies.

Number Talks, embedded in daily review slides, prompt students to solve problems using multiple strategies. Teachers are coached to ask questions such as "Did anyone use a different method?" and "Which strategy seems the easiest to you?" to foster flexible thinking and justification.

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 IBL "Cross Country Road Trip – Day 1," students actively engage in making sense of mathematics by working in groups to solve a real-world problem. They begin by writing down the inquiry question on their Inquiry Sheet, then collaborate to solve the problem using drawings, equations, and strategies. This process gives students multiple opportunities to do math through hands-on problem-solving, write about math by recording their thinking and solutions, and discuss math with peers during group work and class presentations. These experiences promote deeper understanding and support the development of mathematical reasoning and communication skills. The IBL slideshow provides sentence starters to support oral discussion, including "I agree with . . . because . . ." and "The way that . . . explained the solution caused me to change my thinking because . . ." These prompts help students explain their reasoning and engage in collaborative dialogue. Group norms such as "Everyone participates," "One person speaks at a time," and "Be nice, compliment each other!" are embedded in the materials to guide productive conversations and ensure respectful collaboration during math tasks.

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.

The materials include a group sharing model in IBLs where one group presents their solution and explains how they arrived at it. In the grade 4 IBL "Hot Air Balloons," students present their thinking during the "Group Spokesperson Presents Solution" section, followed by a class discussion using sentence starters such as "I agree with . . . because . . ." and "The way that . . . explained the solution caused me to change my thinking because . . ." These structured discussions provide opportunities for students to explain their reasoning, respond to peer strategies, and justify their solutions in a collaborative setting. Sentence stems support students in constructing arguments and respectfully critiquing the reasoning of others.

Reflection questions at the end of each IBL slideshow prompt students to evaluate their own thinking. Questions such as "What did you do best at during today's inquiry?" and "If you could start over, what would you do differently?" guide students in explaining and justifying their approaches while considering improvements.

Number Talks include teacher prompts such as "Can someone explain . . .strategy?" and "Do you agree with that method? Why or why not?" These routines encourage students to reflect on and critique peer strategies, justify their own thinking, and engage in mathematical argumentation.

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

When a grade 4 student answers a question incorrectly in *Freckle's* Adaptive Math Practice, the platform provides immediate support through hints and step-by-step videos. For example, if a student incorrectly solves a multi-digit multiplication problem, a video walkthrough appears showing how to break the problem into partial products. This feedback helps the student understand their mistake and learn how to approach similar problems correctly. *Freckle* anticipates common misconceptions and provides teacher-facing prompts to guide student thinking. For example, when students confuse area with perimeter, the teacher dashboard suggests asking: "Does this measure area or the distance around?" This prompt helps students reflect on the concept and correct their misunderstanding. Similarly, when comparing fractions, teachers are prompted to ask: "Is the fractional part bigger when the denominator is larger? Why?", encouraging deeper reasoning and conceptual clarity. The materials anticipate common

misconceptions and provide teacher-facing prompts. For example, when students confuse area with perimeter, educators are prompted to ask, "Does this measure area or the distance around?" to guide students toward accurate reasoning. Students can access support through visual icons, such as a light bulb for hints, a question mark for guided practice, and a video camera for skill videos. These tools provide feedback based on both student responses and anticipated misconceptions.