magma

ACADEMIC LANGUAGE PROFICIENCY GUIDE

Supporting Emergent Bilingual Students Across ELPS Levels and Bilingual/ESL Programs

How Magma Math's embedded language supports serve emergent bilingual students at every proficiency level and across state-approved bilingual and ESL programs

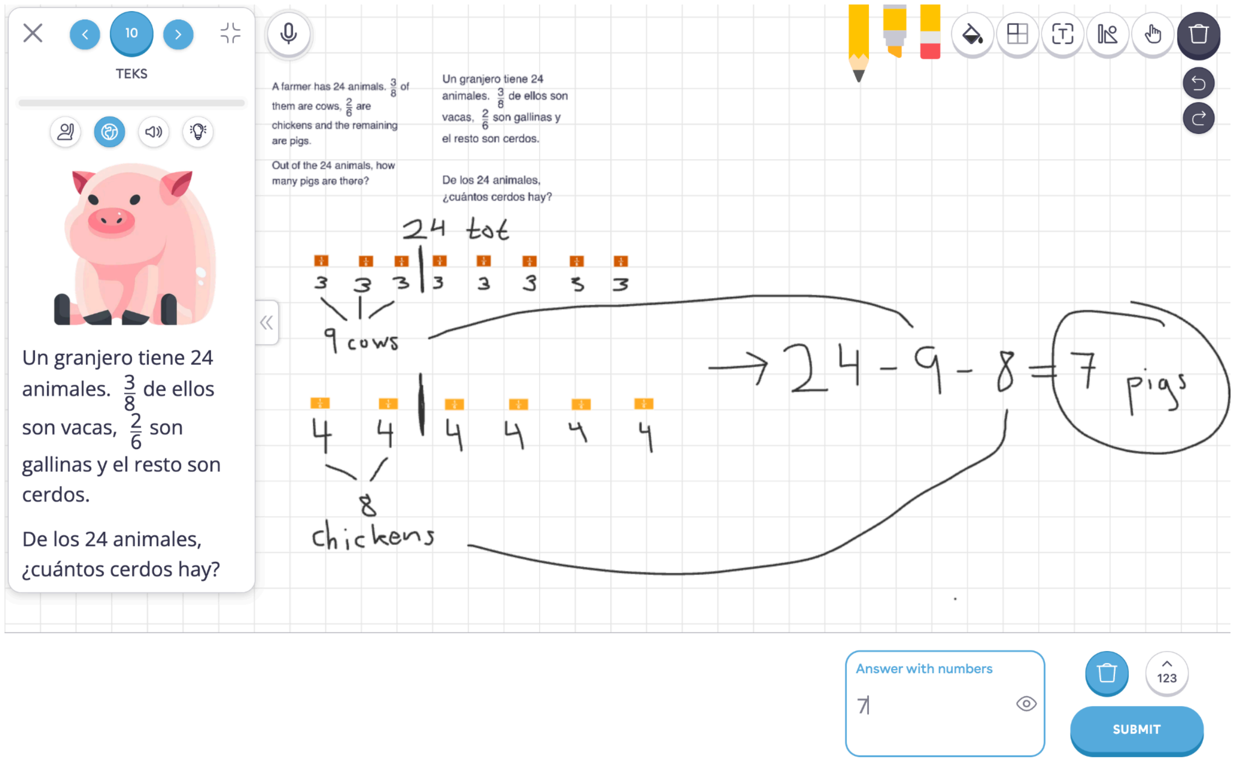
Magma Math includes embedded multilingual supports that accommodate emergent bilingual students at every ELPS proficiency level. **Translation** into 140+ languages, **text-to-speech** in 40+ languages, **voice recording**, and the **Student Canvas** with built-in manipulatives give students multiple ways to access grade-level mathematics and express their thinking—in their home language when needed, and progressively in academic English.

The Lesson Companion Guide describes how these tools support the four ELPS language domains—listening, speaking, reading, and writing—across all classroom settings. This guide shows how academic language demand increases across proficiency levels, how problem difficulty and the Student Canvas relate to linguistic development, and how to implement these supports within state-approved bilingual and ESL programs.

Pre-Production

At this level, students are building understanding through listening and observation. They access mathematical content through **translation** in their home language and hear problems read aloud through **text-to-speech**. On the **Student Canvas**, they demonstrate understanding through drawings, diagrams, and **manipulatives**—fraction bars, number lines, base-ten blocks—without needing to produce English.

Encourage students to use manipulatives and visual representations as their primary way of showing thinking. A student who arranges fraction bars to solve a problem is communicating mathematical reasoning even without words. That visual work becomes the foundation for the academic language they will build at later proficiency levels.

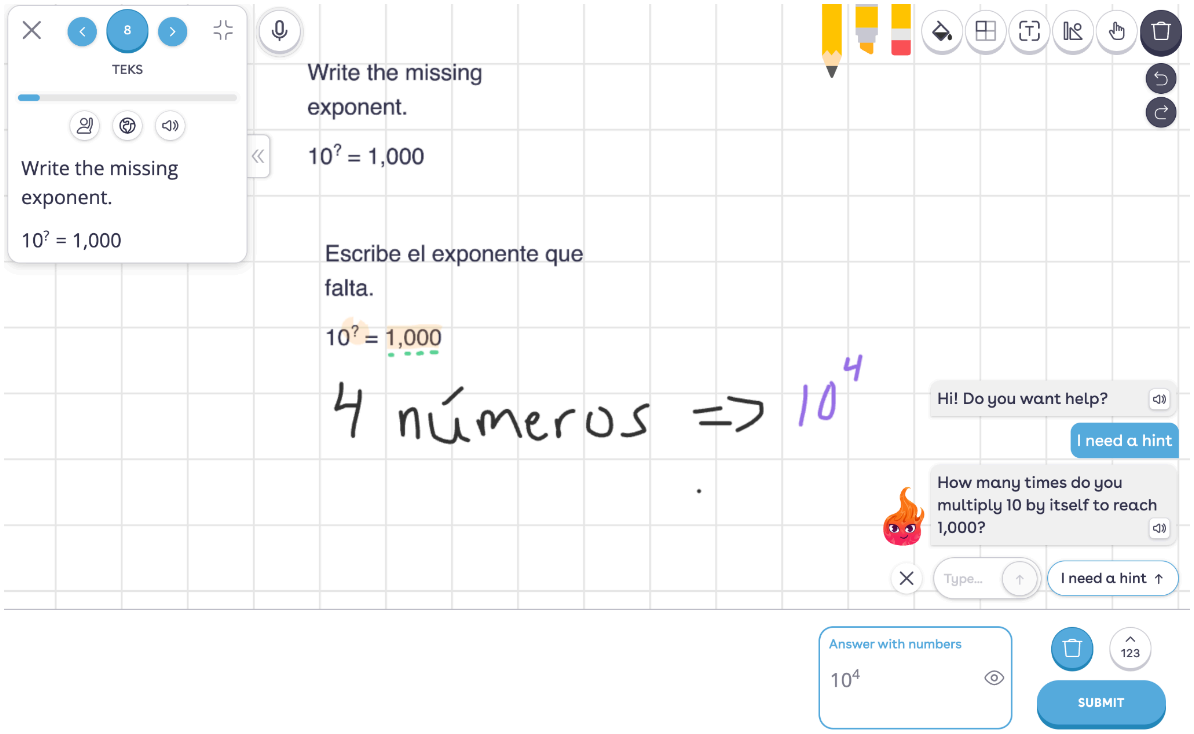


Student Canvas with translation toggle active, showing a problem in Spanish with manipulatives (fraction bars) used to represent the solution

Beginning

Students at this level are starting to produce some English but still rely on their home language. The **translation toggle** lets them read each problem in both languages, side by side. **Translated Lava hints** provide in-the-moment scaffolding in the student's home language when they get stuck.

Encourage students to continue using manipulatives and drawings on the canvas, and to begin labeling their work with short English words—"add," "equal," "more than." Point out cognates when they appear (fraction/fracción, triangle/triángulo). The canvas becomes a space where visual reasoning and emerging English vocabulary develop together.

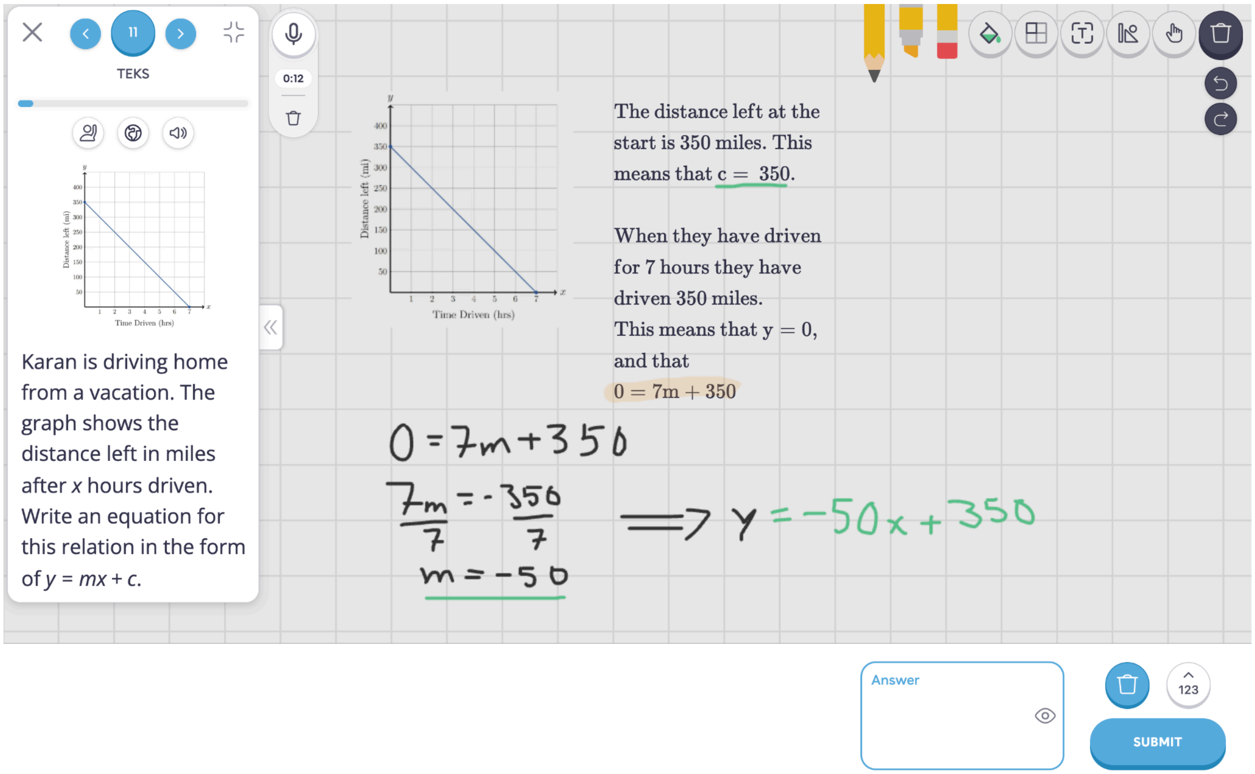


Problem displayed in two languages side by side using the translation toggle, with a Lava hint shown in the student's home language

Intermediate

Students at this level are ready to work primarily in English, with translation available as a safety net. Encourage them to attempt the problem in English first, toggling to their home language only to confirm understanding. **Lava hints** are now in English with translation available as backup.

Ask students to write short explanations on the canvas using academic vocabulary from the problem—"I compared the fractions by…" or "I used regrouping because…" **Voice recording** is a strong alternative for students still building writing stamina. Students at this level may still use manipulatives and diagrams alongside their written or spoken explanations, and that combination strengthens comprehension.



Student Canvas showing a written explanation in English alongside a diagram, with the voice recording button visible

High Intermediate

Students at this level are capable of sustained academic reasoning in English. Expect connected written explanations with justified reasoning—not just answers, but "I know this because..." and "This strategy is more efficient because..."

Use **Discussion Points** to prompt students to refine their language and push toward precise, TEKS-aligned academic vocabulary. **Voice recording** supports multi-step oral reasoning. Translation remains available on demand but should rarely be needed. Students may still choose to use visual representations on the canvas to support their explanations—this is a strength, not a crutch.

Advanced

Students at this level have strong academic English proficiency alongside deep mathematical thinking. Expect detailed written explanations with varied syntax—analysis, synthesis, and evaluation of mathematical strategies.

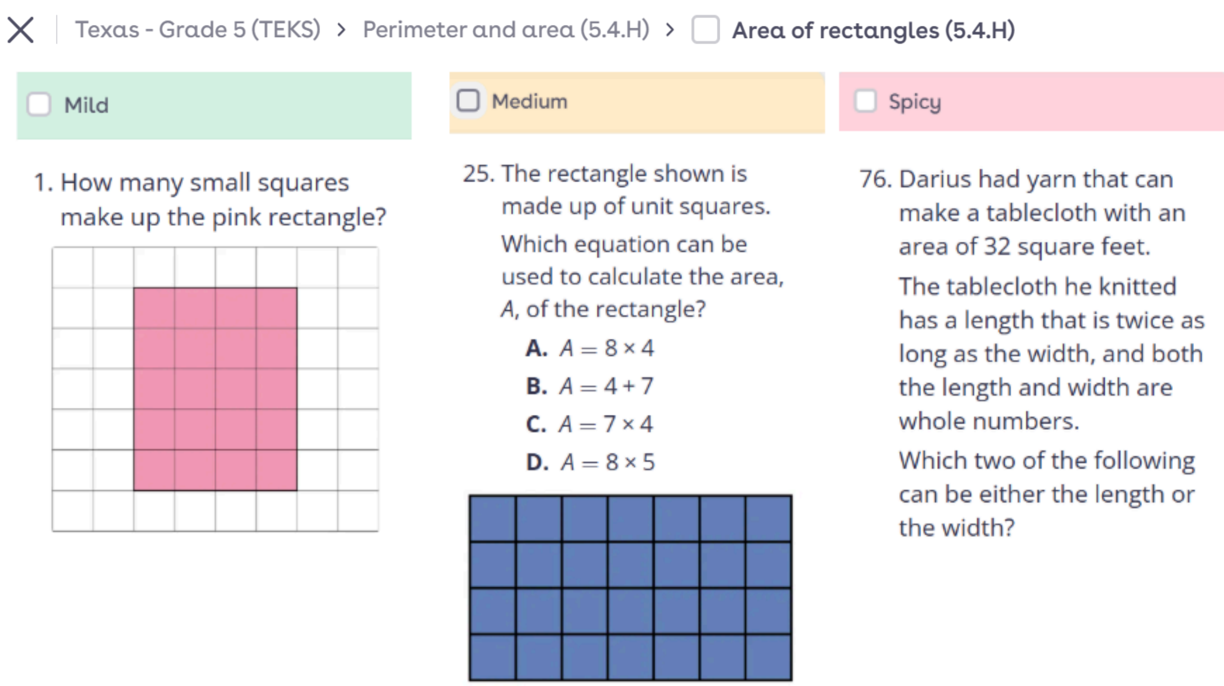
Feature student work through **Teacher Show and Play** as a model for classmates. Use open-ended **Discussion Points** to extend discourse: "How would you explain this to a student who got a different answer?" Linguistic supports are minimal at this level—the challenge is mathematical and conceptual.

How Mild, Medium, and Spicy Problems Relate to Language Proficiency

Every standard in Magma Math includes problems at three difficulty levels: **Mild**, **Medium**, and **Spicy**. These levels differ not only in mathematical complexity but also in linguistic demand. Mild problems tend to use simpler sentence structures, more visual scaffolding, and fewer multi-step instructions. Spicy problems require students to interpret longer prompts, justify reasoning in writing, and engage with more abstract mathematical language.

This does not mean that emergent bilingual students should only work on Mild problems. A student at the Pre-Production level who is mathematically strong may work on Medium or Spicy problems with translation enabled—the language supports remove the barrier while the mathematical challenge stays in place. A student at the Intermediate level may move between difficulty levels depending on the standard, using the linguistic scaffolding built into Mild problems when encountering new vocabulary, and working at Medium or Spicy when the mathematical language is familiar.

The key for teachers is to think about both dimensions—mathematical readiness and linguistic readiness—when assigning problems. The M/M/S structure gives you flexibility to adjust the linguistic complexity of the work without limiting the mathematical thinking.

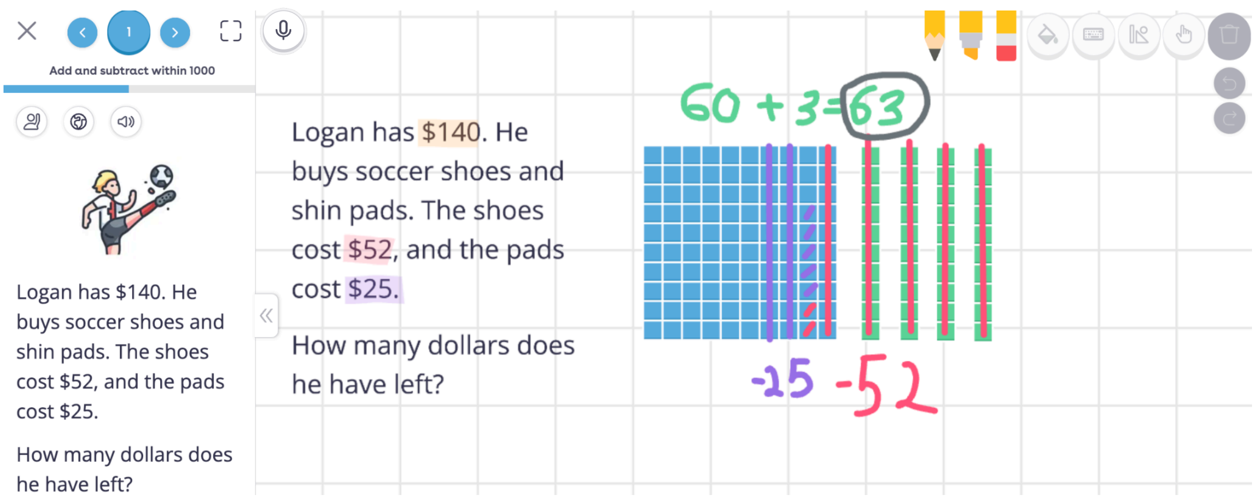


Three problems at Mild, Medium, and Spicy levels on the same standard, showing the difference in linguistic demand (sentence length, vocabulary, justification requirements)

The Student Canvas as a Language Development Tool

The Student Canvas is not just a math workspace—it is a space where language develops. At every proficiency level, encourage students to show their thinking in multiple ways: manipulatives, diagrams, color-coded annotations, equations, written explanations, and voice recordings. Each of these representations is a form of mathematical communication.

A Pre-Production student who arranges base-ten blocks is communicating place value understanding. A Beginning student who labels a drawing with annotations using the translation feature is connecting vocabulary to meaning. An Intermediate student who records a voice explanation is practicing academic language in a low-stakes way. The canvas captures this progression naturally—and gives you evidence of language growth alongside mathematical growth.

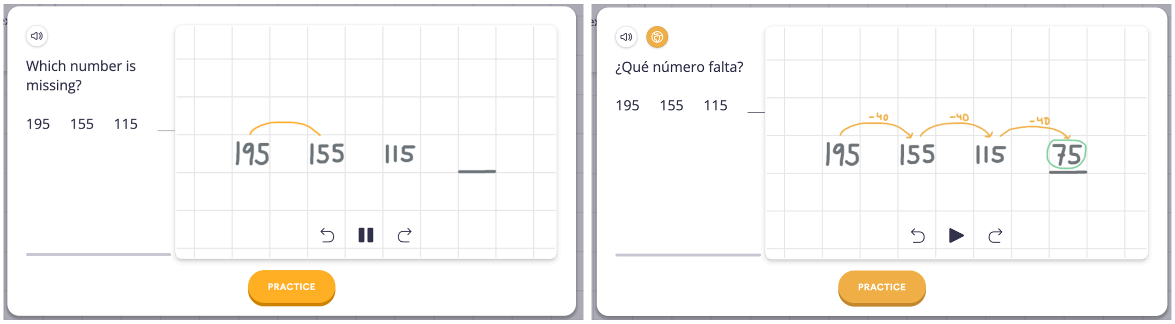


Student Canvas showing manipulatives (base-ten blocks), color-coded annotations, and a written calculation—demonstrating multiple forms of mathematical communication

Practice Mode: Visual Instruction for All Learners

Every practice card in **Practice Mode** includes an instructional video that models a clear strategy for that problem type. These videos are visually based—they show the mathematical process step by step using diagrams, models, and worked examples—making them accessible to all learners regardless of language proficiency.

For emergent bilingual students, these videos provide an additional entry point into the mathematics. A student who cannot yet read the problem text in English can watch the video to understand the mathematical concept, then use translation to work through the problem. With immediate feedback and unlimited retries, Practice Mode gives students a self-paced environment to build both mathematical fluency and familiarity with academic language.



Practice Mode showing a visually-based instructional video with step-by-step worked example, alongside the student workspace with translation toggle

Progression Across Proficiency Levels

The table below shows how linguistic support systematically reduces while the demand for academic English increases across all five ELPS proficiency levels.

Proficiency Level	**Language Mode**	**Linguistic Supports**	**Student Response**
Pre-Production	Home language (translated problems and TTS)	Full translation, text-to-speech, visual models, manipulatives, Practice Mode videos	Drawings, diagrams, manipulatives (no English required)
Beginning	Translation (toggle between home language and English)	Translation, TTS, translated hints, visual support, manipulatives, Practice Mode videos	Labeled drawings with annotations using the translation feature; short English labels
Intermediate	Primarily English (with selective translation)	English hints (translation available), optional TTS, voice recording, Practice Mode videos	Short written explanations with academic vocabulary; voice recording; visual models as needed
High Intermediate	English (translation rarely used)	Translation on demand; Discussion Points for refinement	Connected sentences with justified multi-step reasoning; voice response
Advanced	Independent academic English	Minimal support; open-ended Discussion Points	Extended written explanations; fluent oral discourse; work as class model

The Heatmap and Stats Tab give teachers real-time visibility into student performance across an assignment. For emergent bilingual students, these tools support proficiency-level monitoring by showing where students are successfully demonstrating understanding and where language demand may be creating barriers. A teacher working with Pre-Production and Beginning students can use the Heatmap to identify which students engaged with problems using visual and manipulative-based responses, and use that data to inform small-group follow-up. As students move toward Intermediate and above, the Stats Tab shows patterns in written response quality and problem completion that signal growth in academic language alongside mathematical understanding.

Implementation Across State-Approved Bilingual and ESL Programs

Texas bilingual and ESL programs take different forms, and Magma Math's language supports adapt to each. The same tools—translation, text-to-speech, translation toggle, voice recording, and the Student Canvas—serve different purposes depending on the instructional model. Here is how to implement them effectively in each context.

Bilingual Classroom (Dual Language or Transitional)

In classrooms where both languages are actively present, use the **translation toggle** so students can read problems in both languages. Start with home language access available so students build mathematical understanding without an English barrier, then gradually encourage toggling toward English as they develop academic vocabulary. You control when and how students move between languages—matching the transition to your program's language allocation model.

ESL Classroom (Integrated ESL)

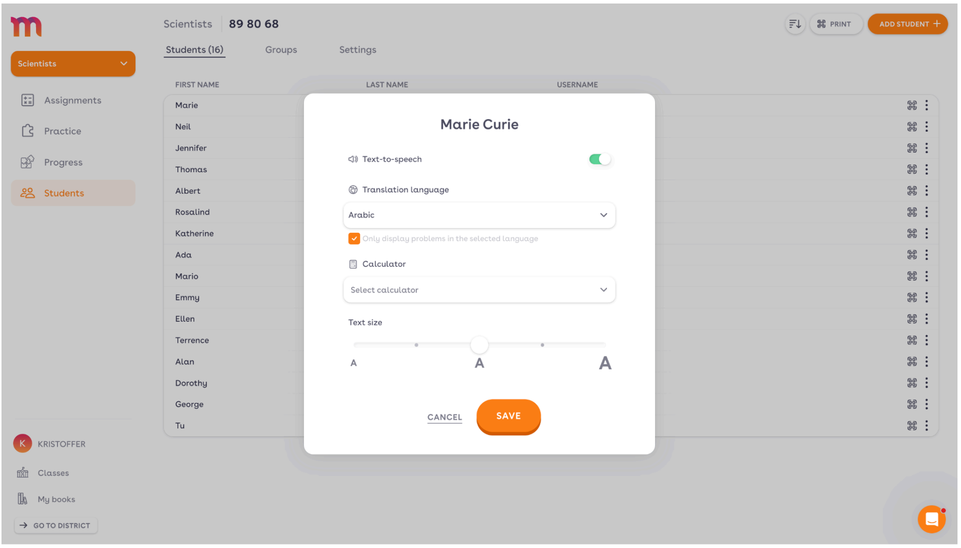
In classrooms focused on teaching grade-level mathematics to English learners, use **translation** and **text-to-speech** as scaffolds. Students attempt problems in English first, with translation available to confirm understanding. Use the academic vocabulary embedded in problems as a basis for explicit vocabulary instruction. As proficiency grows, students rely less on translation and more on the mathematical context and visual supports on the canvas.

Dual Language Program (One-Way or Two-Way)

In programs developing biliteracy across two languages, leverage Magma Math's multilingual capabilities by having students toggle between languages intentionally—strengthening both languages simultaneously. Use **voice recording** to capture explanations in either language, and encourage students to annotate their canvas work bilingually. The platform supports mathematical thinking in both languages without requiring separate materials.

ESL Pull-Out Settings

When students leave the classroom for dedicated ESL time, **Practice Mode** provides focused, self-paced work with full language support. Each practice card includes a visually-based instructional video, immediate feedback, and unlimited retries. Students build both mathematical fluency and language familiarity in a low-stakes environment. Use the **Heatmap** and **Stats Tab** to coordinate with the ESL teacher on which standards and skills to target.



Teacher support settings

Academic mathematical language develops through consistent mathematical engagement—not through separate language instruction. When students work regularly on grade-level problems, show their thinking on the canvas in multiple ways, and participate in classroom discourse at the level they are ready for, their language grows alongside their mathematical understanding. The tools meet students where they are. Your role is to set the expectation, encourage different forms of representation, and gradually raise the demand—regardless of the program model your school uses.