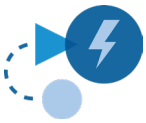
THE MATH NARRATIVE PROJECT

MESSAGING RECOMMENDATIONS: Teachers

These recommendations are intended for people communicating directly with **teachers**. They are meant to support professionals, including teachers, instructional designers, district leaders, curriculum developers, content developers, and others who work to engage, motivate, and enable students to learn math.

There are nine messaging recommendations for teachers. The first three recommendations should be applied across all messaging, so that all messaging interventions elevate student agency and acknowledge the real-world context and emotional nature of math learning. This approach helps prime audiences to be more receptive to messaging based on the other recommendations.

If you are introducing these recommendations to teachers, start by acknowledging the real challenges they face and consider using a variety of trusted messengers who understand different teaching contexts. These approaches should be presented as small, practical, evidence-based tools that are easy to use (rather than a wholesale new teaching approach) and have been tested across a wide range of classrooms.



ELEVATE STUDENT AGENCY: Messaging should elevate student agency and center students' emotions and experiences, which are critical to their math learning.

- Offer messaging that encourages teachers to invite students to think about how they approach, persist through, and solve problems.
- Elevate students as messengers to teachers to encourage teachers to reflect, be curious, and empathize with students' emotions and experiences learning math. Share a range of first-person student stories that give teachers insight into students' emotional experiences learning math.
- Include messaging that encourages teachers to invite students to exercise their own agency, rather than tell students how to act or feel.

ACKNOWLEDGE REAL-WORLD CONTEXT: Empathize with students, teachers, and parents by acknowledging and naming the real-world challenges they face.

- Acknowledge the constraints that teachers experience to help reduce their skepticism and make them more open to suggested changes (e.g., large class sizes, students with different levels of math knowledge and language proficiency, gaps in learning from COVID, pacing and curriculum requirements, student absences).

ACKNOWLEDGE EMOTIONS IN MATH LEARNING: Normalize the emotional nature of learning math, and provide examples of how negative emotions can be reinterpreted.

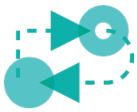
- Encourage teachers to empathize with students' negative or mixed emotional experiences learning math by utilizing prompts that enable teachers to reflect on their own math learning journeys or creating opportunities for teachers to reflect individually or with peers on how emotions show up in their math teaching.
- Use stories of peer teachers to show teachers they have a role in helping students reinterpret their emotions. Provide teachers with examples of concrete things they can say to students to help them reinterpret their emotions in real time.
- Affirm that teachers can take small steps to acknowledge students' emotions, which builds trust with their students, and does not require training as a therapist or counselor.

MAKE MATH RELEVANT: Deliver credible and motivational messaging on the utility, relevance, and value of higher-level math for students' lives, desired careers, and futures.

- Affirm that teachers are frequently asked about the relevance of math and find it challenging to provide answers that students find credible.
- Frame messages about the relevance of math for students as a "toolbox" for teachers. A toolbox reinforces the idea that no single example of relevance will work for all students or for all teachers.
- Provide a range of examples about the relevance of math connected to contexts students understand, believe are real, and care about (e.g., keeping your career options open, financial literacy, having greater financial power).
- Avoid messaging that focuses exclusively on how higher-level math is a prerequisite to future education goals, refers to the value of math in abstract phrases like "math is a universal language", or lists specific jobs that use higher-level math.

AFFIRM THE VALUE OF MISTAKES: Normalize making mistakes as an important and valuable part of learning, including learning math.

- Show teachers how to respond positively when students make mistakes and address negative emotions such as embarrassment or fear that students often experience when they make mistakes.
- Help teachers realize that students need to hear explicit messages that reframe making mistakes as a valuable part of the math learning process.



ENCOURAGE HELP-SEEKING: Build student confidence to seek the help they need to learn math and equip parents and teachers with messaging that supports and encourages students to seek help.

- Encourage teachers to understand better the barriers to seeking help that many students experience.
- Encourage teachers to reflect on moments when students may be struggling but too embarrassed to ask for help, and what actions they can take as a teacher to encourage students to seek help.
- Guide teachers to feel better equipped to encourage students to seek help by sharing stories of peer teachers who succeed in creating classrooms where students regularly ask for help (in class, after school, online, one-on-one at the teachers' desk, etc.) .
- Motivate teachers to create an environment in which students feel more comfortable asking questions by sharing stories of other teachers who have changed their practices and example words teachers can say to praise or destigmatize asking questions (e.g., "It's helpful when you ask a question. A lot of other students have the same question.").

REFRAME STRUGGLE AND CAPABILITY: Reframe struggle from a sign of lacking capability to a sign of needing support.

- Create opportunities for teachers to reflect on when and why they determine that some students are unable or less likely to be able to learn higher-level math, like algebra, by sharing stories of peer teachers who have reconsidered how they perceive students' capabilities or small changes that helped them engage with students differently.
- Avoid messages that suggest teachers deliver false optimism or positivity (i.e., "Struggling is great!"), which can feel inauthentic and frustrating for students if not offered with concrete ways to get help or solve problems.
- When possible, deliver messaging during the actual moment of struggle, as it is particularly impactful.

REASSESS ASSUMPTIONS: Encourage teachers to reexamine their assumptions about what certain student behaviors mean and the impact of students' negative emotions on their math learning experience.

- Encourage teachers to get curious about how students feel about learning math and the connection between student behaviors and student emotions. For example, ask teachers to reflect on the question, "What do I believe confusion and frustration look like in my students?" and, "How can I find out if something else is going on for this student?"
- Provide opportunities for teachers to reflect on how they interpret certain student behaviors and the emotions that may be driving those behaviors by sharing stories from students' perspectives that describe the behaviors they do when they feel stressed or overwhelmed.
- Avoid implying that teachers don't understand their students at all. Rather, remind teachers about their positive motivations to be teachers and then show them how to reinterpret some students' behaviors and small steps they can take to help their students and get their students re-engaged.

PRIORITIZE BUILDING RELATIONSHIPS: Show teachers the impact of their relationships with students on math learning and support them in prioritizing building relationships in their classrooms.

- Position building relationships as critical to learning math, an element of math learning that significantly helps students learn higher-level math effectively and successfully.
- Leverage teachers' desire to help their students to motivate and encourage teachers to take on and try out interventions by showing them small changes that don't take a lot of time that strengthen relationships with students.
- Create opportunities for teachers to reflect on how intentional efforts to build positive relationships with students, especially early in the year, build trust and improve their ability to teach math.
- Show teachers how developing good relationships positively impacts students' math learning and support teachers to prioritize building relationships with students by tapping into their beliefs about the value of relationships and belonging and sharing stories from students and diverse teachers that demonstrate the impact of building empathy and trust in the classroom.
- Avoid messaging that implies relationships should be prioritized at the expense of other important teaching practices; show it is a "both/and."