Microlearning to Promote Math Talk Training Plan and Agenda

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Promoting Math Talk Training Plan and Agenda

Today, math learning is not simply about algorithms. It involves real-world problems with a high level of rigor. Teachers do more in the math classroom than guiding students through the steps toward a solution. In addition to teaching learners how to use the four operations to manipulate numbers to solve a problem, instructors are teaching problem-solving skills and strategies for students to make sense of a problem, decompose the problem, and then synthesize it using numbers.

Collaborative learning allows students to work together toward a common goal by sharing ideas, strategies, and knowledge to discover, learn, and academically socialize. In a two-module course, *Promoting Math Talk*, as outlined in my written training plan (Appendix A) and agenda (Appendix B), educators will learn the importance of math talk and engage in activities to learn etiquette in a collabative environment in module one. In module two, educators will practice engaging in math talk using a variety of strategies to promote collaborative discussion and sharing of ideas in a student learning experience.

When educators possess the skills to implement strategies in the classroom to encourage and promote student collaboration, learning can be enriching, successful, and a positive experience on many levels. Students can grow and flourish in a core subject, and educators can apply learned strategies in other contexts to achieve success there too.

References

American College of Education. (2025). *DL5773 Online Course Development: Module 1* [Part 4 presentation]. Canvas. https://2571531.kaf.kaltura.com/media/t/1_5q85jhfp

Magliaro, S. G., Lockee, B. B., & Burton, J. K. (2005). Direct instruction revisited: A key model for instructional technology. *Educational Technology Research and Development*, *53*(4), 41–55.

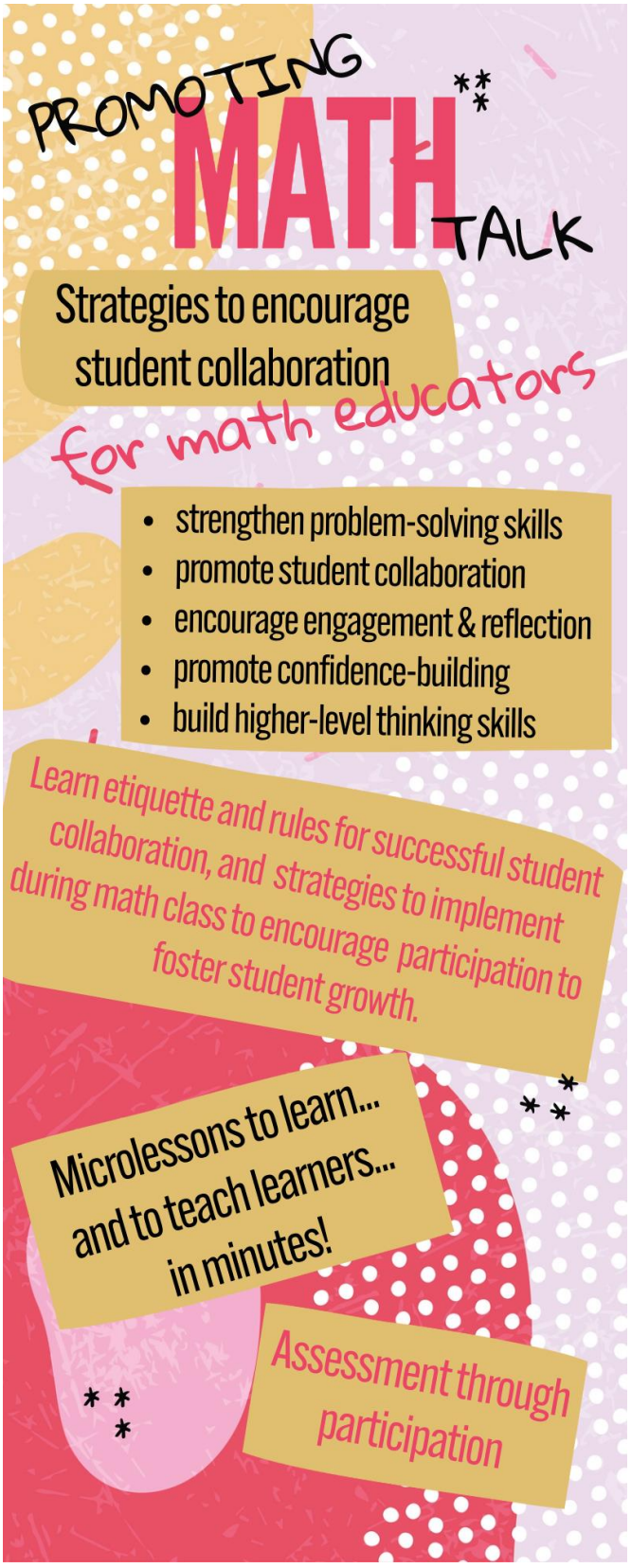
Appendix A

Course Name	Microlearning to Promote Math Talk
Instructional Designer	Denise Beck
Subject	Mathematics
Course Description	*Microlearning to Promote Math Talk* is a two-module course intended to teach educators strategies to promote mathematical conversation amongst learners, both in the classroom and in a virtual setting. Educators will learn activities to implement during math instruction to increase collaborative exploration and to build confidence in learners. Exercises to teach conversational etiquette and rules, as well as strategies to promote meaningful conversations/sharing of information will be the focus of the course.
Audience	Middle school math educators
Training Purpose • **Rationale** • **Skill/knowledge gap to be filled**	Some students struggle for an approach to a problem, and others lack the skills to decompose a problem for meaning and to reconstruct or synthesize it with numbers and symbols, while other students lack the language to understand the problem altogether. There are a variety of reasons why math can be a challenge. Yet real-world problems and higher-level thinking problems are what learners are faced with in today's math learning, which has made math more challenging. Problem-solving and the ability to explain one's thinking demonstrates a deep understanding of content. When learners share in the construction of their methodologies, they are active participants in rich learning experiences. Learners will be tasked with learning strategies to engage with each other to problem-solve, share, reflect, and refine while working in partnerships, small groups, and even teams. After completing the course they will be

	equipped to implement collaborative tactics in their classroom environments.
Training Approach	**Module One:** Educators will view videos of collaborative math learning in a classroom environment and a virtual environment. There will be a debrief to discuss what learners saw happening between videos, which will be charted. This sharing of information will be used to launch into etiquette and rules of having academic conversations, and to brainstorm different ways students can collaborate in the math setting which will be done on a Jamboard. **Module Two:** Learners will watch quick individual videos of a variety of strategies being used to collaborate to learn in the math setting. In between videos, learners will briefly practice this skill.
Measurable Course Outcomes	**Module One:** Engagement in conversation, Jamboard participation, group discussion. **Module Two:** Learners will showcase what they have learned by role-playing specific strategies. Breakout rooms with a contribution to conversation upon returning to main group.
Delivery Method	ELearning video
Required Time	5 minutes
Audience Member Action Steps	**Module One:** watch videos, discussion, brainstorming on Jamboard **Module Two:** role-playing, individual input
Micro Assessment	**Module One:** A short Google Form will be shared through a link to ask: “Share something positive you learned in today’s collaborative learning lesson and tell why it was a positive experience for you, “ and “Share anything that you feel would not work so well in your classroom. Please elaborate.” **Module Two:** A short Google Form will be shared through a link to ask: “Which strategy do you feel was most effective and why?” with a list of the

	strategies we used, and “Is there another strategy you feel would be effective? Please share.” These questions are designed to encourage learners to reflect on the activities and to provide feedback to the instructor for future training experiences.

Appendix B


PROMOTING
MATH
TALK
Strategies to encourage student collaboration
for math educators
• strengthen problem-solving skills
• promote student collaboration
• encourage engagement & reflection
• promote confidence-building
• build higher-level thinking skills
Learn etiquette and rules for successful student collaboration, and strategies to implement during math class to encourage participation to foster student growth.
Microlessons to learn... and to teach learners... in minutes!
Assessment through participation