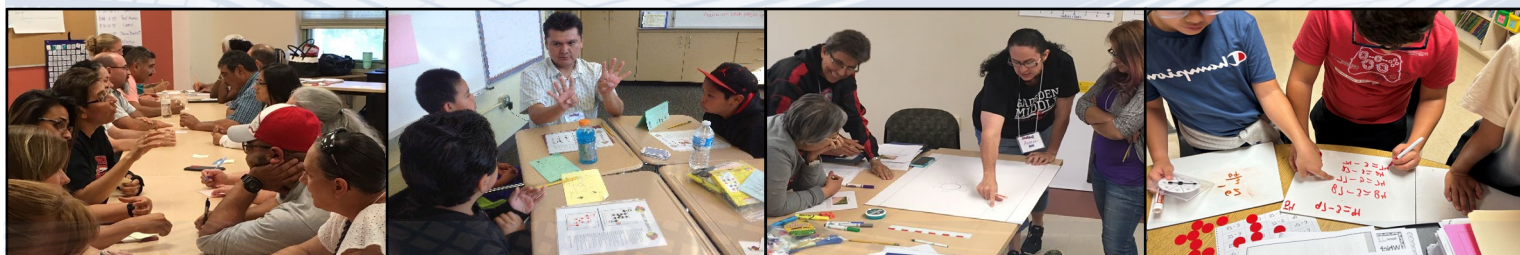


MATHEMATICALLY CONNECTED COMMUNITIES

Our **vision** is to improve the teaching and learning of K-12 mathematics and student achievement by building a statewide learning community of mathematics educators, mathematicians, and public school leaders.



Who is MC²

Mathematically Connected Communities (MC²) is a collaborative group of math educators committed to supporting all stakeholders in New Mexico to improve student math learning. It's about a deep love for providing meaningful professional learning that supports teachers in the field of teaching mathematics.

MC² is a trusted and valued partner because of the care, creativity, and high standards we bring to everything we do.

We believe there is always a way to make good work happen when it matters. We align with what we feel is truly important: meeting people where they are, learning in partnership, and growing communities rooted in collaboration and accessibility.

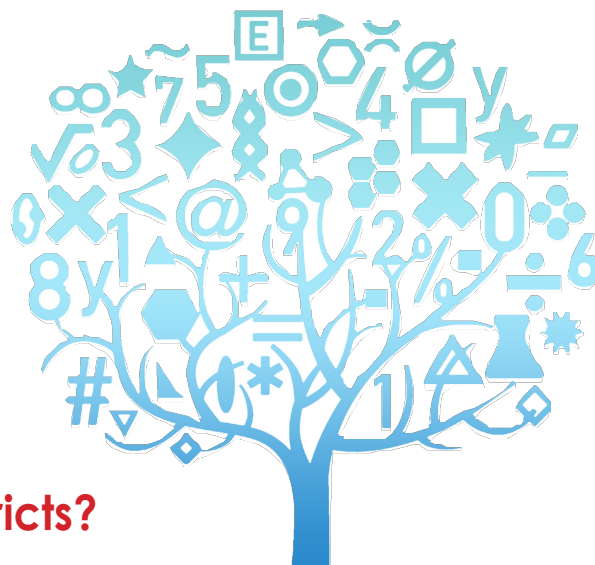
Grounded in research and the wisdom of others, we believe that learners must grapple with, and construct their own understanding. MC² is a place where learners' thinking is honored, and where we guide and support others in facilitating meaningful math learning.

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Our Mission

To develop a sustainable, statewide learning community of teachers, teacher leaders, and principles who are highly knowledgeable about the Common Core State Standards for Mathematics (CCSS-M), research-based trajectories for learning, and effective instructional strategies that support all students' learning and achievement in mathematics.



What can MC² provide to partner districts?

Mathematics Content Development

This professional learning opportunity is designed to deepen educators' understanding of numbers, operations, and algebraic thinking, and provides practical strategies for enhancing math instruction. Participants gain hands-on experience with strategies and tools that make mathematical concepts engaging and accessible and support students' conceptual understanding of mathematics that supports abstract reasoning. Topics that may be addressed include:

- Number, Operations, and Algebraic Reasoning
- Geometry and Measurement
- Standards for Mathematical Practice
- Implementing **Number Talks** to Promote Fluency in Basic Operations

Number Talks

Number Talks are a powerful instructional routine for helping students develop computational fluency and the ability to work flexibly with numbers.

"I noticed how my students got empowered. They learn strategies that help them explore different solutions to get to the right answer. They know that if they don't have the correct answer, it's ok because they're still learning."

-Teacher in Santa Fe, NM

They transform the math classroom by encouraging meaningful math discourse and promoting multiple strategies for problem-solving. Students engage with problems in whole-class or small-group settings, developing the ability to solve them mentally with accuracy, efficiency, and flexibility.

NUMBER TALK Hand Signals



I'm thinking



**I have an answer
and a strategy**



**I have more than
one strategy**



I agree

These skills support students in becoming mathematically proficient by helping them reason about quantitative information, develop strong number sense, and evaluate the reasonableness of their solutions.

Number Talks Workshop Overview

- Face-to-face Sessions (4)
- Follow-up Sessions
- Leadership Session (1)
- Capacity Building for Instructional Coaches

MathLab®

In conjunction with a year-long professional learning plan in mathematics, **MathLab®** provides K–12 teachers with 3–5 days of learning through a study of classroom practice:

- Primary purpose is to study classroom practice and students' mathematical understanding
- Set in a student-centered learning environment built in an authentic classroom
- Students make conjectures about mathematical ideas, explain their solution strategies and develop conceptual understanding. Simultaneously, teachers engage in peer discussion about the impact of instructional decisions on student learning and engagement
- Teachers deepen their own mathematical knowledge to better understand the expectations of the Common Core State Standards in Mathematics (CCSS-M), progression of learning, and learn to establish an engaging math environment



“Watching how Ms. Coca used the various aspects of norms, math practices and standards-based learning environment made them more practical for the classroom.”

–K–3 MathLab® Participant

Fluency Development

Developing fluency in addition and subtraction (also thought of as additive reasoning) in the primary grades is an important benchmark that goes much deeper than memorizing facts. Additive reasoning is the foundation for developing multiplicative reasoning, as well as making sense of fractions and eventually algebra. The STEM Outreach programs and MC² coordinate

efforts to help districts provide intensive, customized, in-person tutoring for K–6 students.

High Impact Tutoring (K–6)

The tutoring sessions take place at school sites during the after-school programs with certified teachers who receive extensive professional learning in mathematics intervention. The tutoring offered to students is provided in both individual sessions and small group activities. Every student is assessed at the beginning of each semester to understand their current knowledge of number concepts in order to design instruction for each student's individualized learning path. Continuous formative assessment through

close observation of student's problem-solving strategies and their responses to assessment tasks allow for revision of the instructional plan to meet each student's learning needs

Math Fluency (K–2)

Small guided math instruction that builds foundational knowledge in addition and subtraction:

- Small student to teacher ratio
- Utilizes centers with small group math games
- Student progress is tracked using targeted formative assessment
- Support visits from MC² Specialists provided as needed upon request



Master of Arts in Education: Elementary Mathematics Science Specialist (EMSS)

The program aims to develop specialists in New Mexico school districts who are experts in elementary mathematics and science content, and research-based elementary pedagogy. These specialists will demonstrate strong leadership skills and a disposition to be advocates for student learning, teacher support, and community involvement at the classroom, school, district, and state levels.

EMSS Program Logistics

- *Two-year, 34-credit hybrid program*
- *Cohort-style collaboration across the state of New Mexico*
- *Participants and instructors come together four weekends per semester at the main NMSU campus in Las Cruces, New Mexico*

Numeracy Unlocks Math Rigor in Our Students (NUMeROS)

NUMeROS is a math micro-credential series designed to build mathematics content knowledge for K–5 teachers. The series provides them with the resources needed to build strong conceptual knowledge and mathematical reasoning for elementary students.

Two Tailored Options

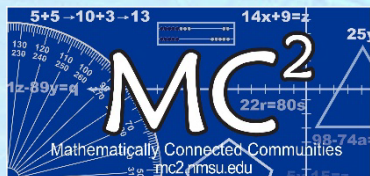
Grades K–2 Pathway

- Number Talks
- Operations and Algebraic Thinking
- Representations and Units Construction
- Number & Operations in Base Ten

Grades 3–5 Pathway

- Whole Number & Operations and Algebraic Thinking
- Models for Multiplication and Division
- Fraction Understanding
- Foundations in Ratio Understanding

Scan to Request More Information



Mathematically Connected Communities
New Mexico State University
P.O. Box 30001, MSC-3R
Las Cruces, New Mexico 88003

Email: mc2@nmsu.edu
Office Phone: 575-646-1595