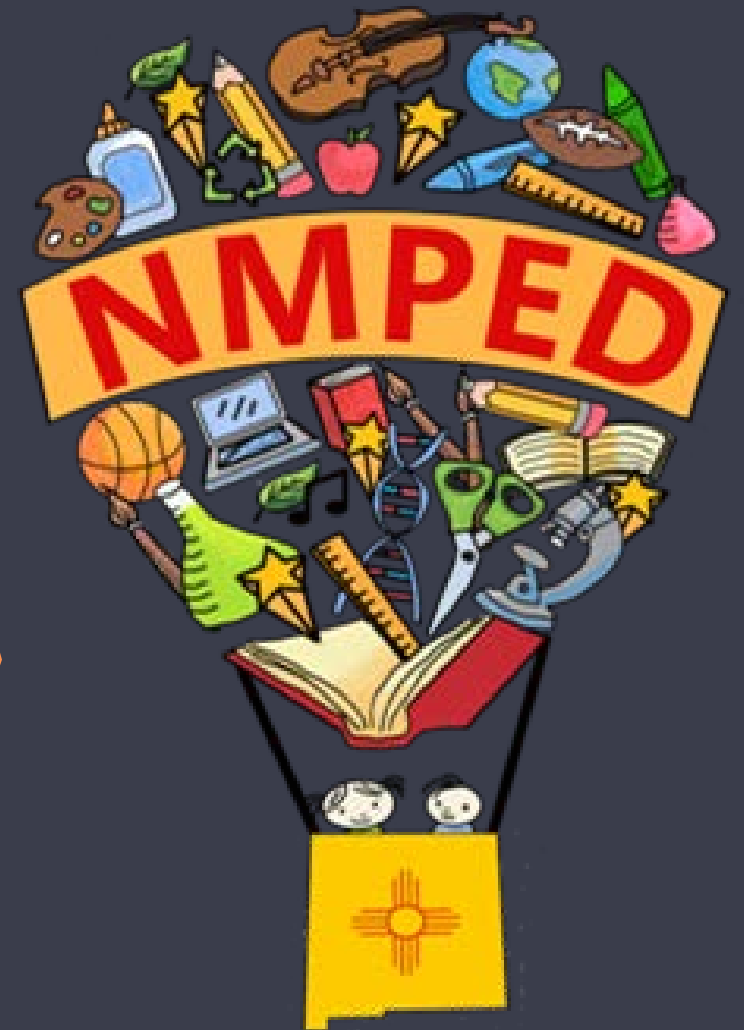


# Secondary Math Innovations

Amanda De Bell, Deputy Secretary of  
Teaching, Learning and Innovation  
Shafiq Chaudhary, Director, Math and  
Science Bureau

*Wednesday, July 26, 2023*

*Investing for tomorrow, delivering today.*



# Overview

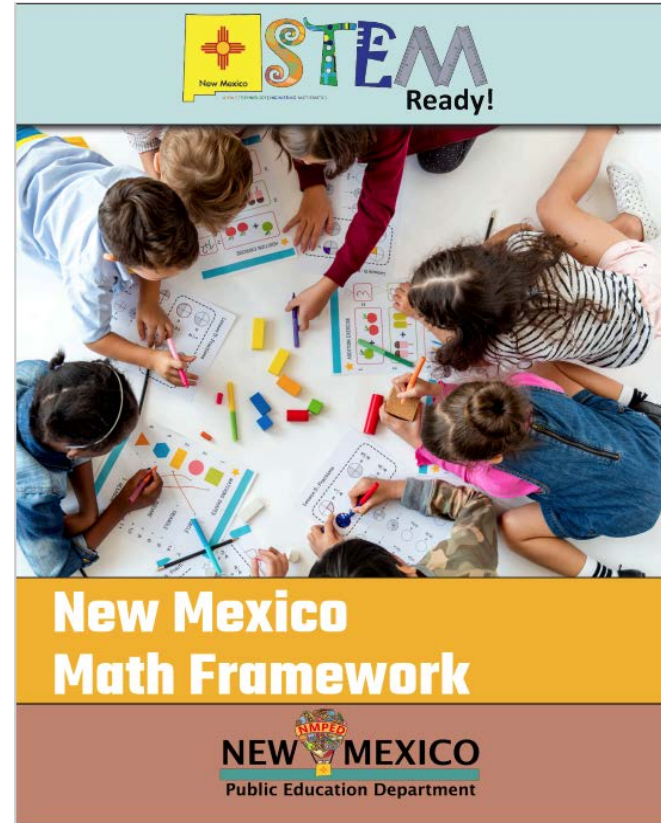
## Topics

1. Setting the Stage
2. Innovations in Secondary Math
3. Current State of Math
4. Future Goals
5. Policy Need and Question and Answer

# How did we get here?

## Critical Components

- Leadership
- Universal Instruction
- Assessment for Learning
- Professional Learning
- Families and Communities



# Increasing Secondary Math Innovations

## Main Points

- K-12 learning progression need innovations
- Schools are the units of change
- Coherent systems (across PreK–12, higher education, non-profits, informal education, workforce)



# Current State of Secondary Math

## Focus on Algebra

- Developed in partnership with Charles A. Dana Center
- Effective pedagogy emphasizing algebraic thinking and concepts in middle school progression leading to Algebra 1
  - Cohort 1: Consisting of 119 6-9 math educators from 12 districts/charters
  - Cohort 2: Consisting of 30 6-9 math educators from 6 districts/charters
- Support systemic and sustainable schoolwide conversations to analyze instructional programs
- **Teachers and administrators** reported high confidence in implementing new learning
- **School administration** makes every effort to attend all sessions, including admin-optional sessions



# Current State of Secondary Math

## Re-Envision Math Pathways

- Facilitated by Charles A. Dana Center
- Visions and Pathways working groups, consisting of 36 math educators/stakeholders from high school, post-secondary, workforce, informal education
- Developing recommendations for expanding pathways

## Current Thinking

- Expanding pathways: Advanced Algebra, Data Science, and Quantitative Reasoning
- Interweave more statistics in Geometry and Algebra 2

## Timeline

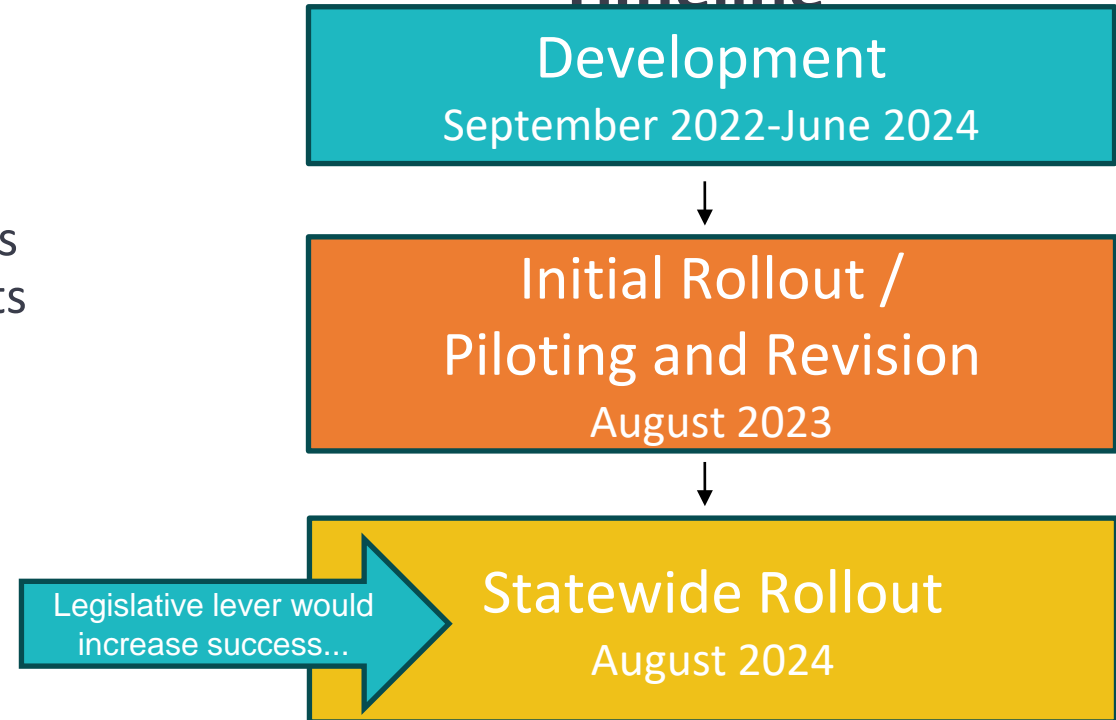


# Current State of Secondary Math

## Math Micro-credentials

- Developed with New Mexico State University Mathematically Connected Communities and feedback from teacher leaders
- Building math content knowledge for K-5 educators to assure a positive K-12 math trajectory for students
- Enhancing strong conceptual knowledge and reasoning in students
- Series of four micro-credential courses to be completed in one year
- Based on research from NCTM *Principles to Action, Catalyzing Change in Elementary*

## Timeline



# Future of Secondary Mathematics

Building Capacity in Schools

Stakeholder Engagement

Data Collection



# Potential Resource or Policy Needs

## Continued, collaborative conversations with LESC staff:

- Continued learning and engagement in all initiatives/conversations
- Legislative lever for math professional learning (PL)
- Funding for PL in mathematics
- Recurring funding to continue supporting the content area of math and STEM

# Questions

