

Welcome!

The event will start shortly. Please take a moment to introduce yourself in the chat by sharing your name and school or organization.

**Ohio Statewide
Family Engagement Center**





Making Math Magnetic: Engaging Families in Students' Math Learning



**Ohio Statewide
Family Engagement Center**



Ohio Network of Partnership Schools

Contact us for support
OhioSFEC@osu.edu

We support the development and academic achievement of children and youth by **providing tools and learning opportunities** to Ohio families and schools for building **effective family-school partnerships.**



What You Will Receive Today

- Ideas to strengthen family engagement in math
- A community of support to help you overcome challenges
- Resources to support math achievement



Featured Speaker



Holly Kreider, Ed.D

Director
Center for Family Math



Every Family Counts!

Engaging families in students' math learning

Ohio Network of NNPS Schools

October 30, 2025



Introductions

In the chat, share your:

- Name
- Location and Role
- An emoji reflecting how you feel about math



National Association for Family, School and Community Engagement



OUR MISSION

Advancing high-impact policies and practices for family, school, and community engagement to promote child development and improve student achievement.



OUR VISION

A world where family engagement is universally practiced as an essential strategy for improving children's learning and advancing equity.



Mission

Advancing research, policies, practices, partnerships, and systems that unlock the power and love of math through family and community engagement.

Vision

A world where Family Math advances learning and equity for each and every child.



FAMILY MATH

Learning Objectives

- Describe promising practices
- Reflect on how your school's current math goal or plans engage families
- Explain the challenges that families face
- Redesign math activities and school events (e.g., Math Night) to strengthen family engagement in math.



What is Family Math?



How many?

#unitchat





“We define Family Math as culturally-relevant math activities and interactions occurring within the informal contexts in which families engage with children and youth” (Eason, et al, 2020)

What is Family Math? Debunking Math Myths

- For everyone
- Starts early in life
- More than just numbers
- Culture and context matter
- Part of everyday life
- Makes sense and is useful



What is Family Math? A Shared Responsibility

For Families

- maintaining high expectations for math learning
- engaging in math talk and activities in the home and community
- advocating for and connecting to math experiences in the community



For Practitioners

- opening doors to families to ensure access to resources and ideas
- elevating and expanding the math that families do
- building relationships around math in the community



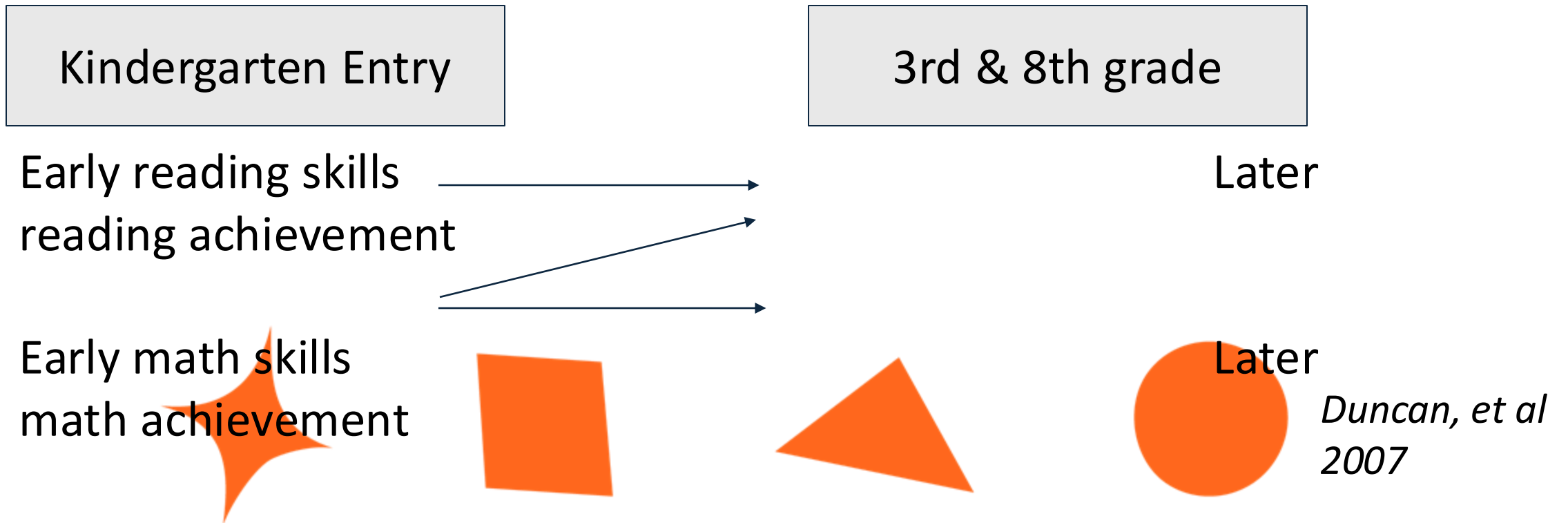
Why Focus on Math and Family Math?



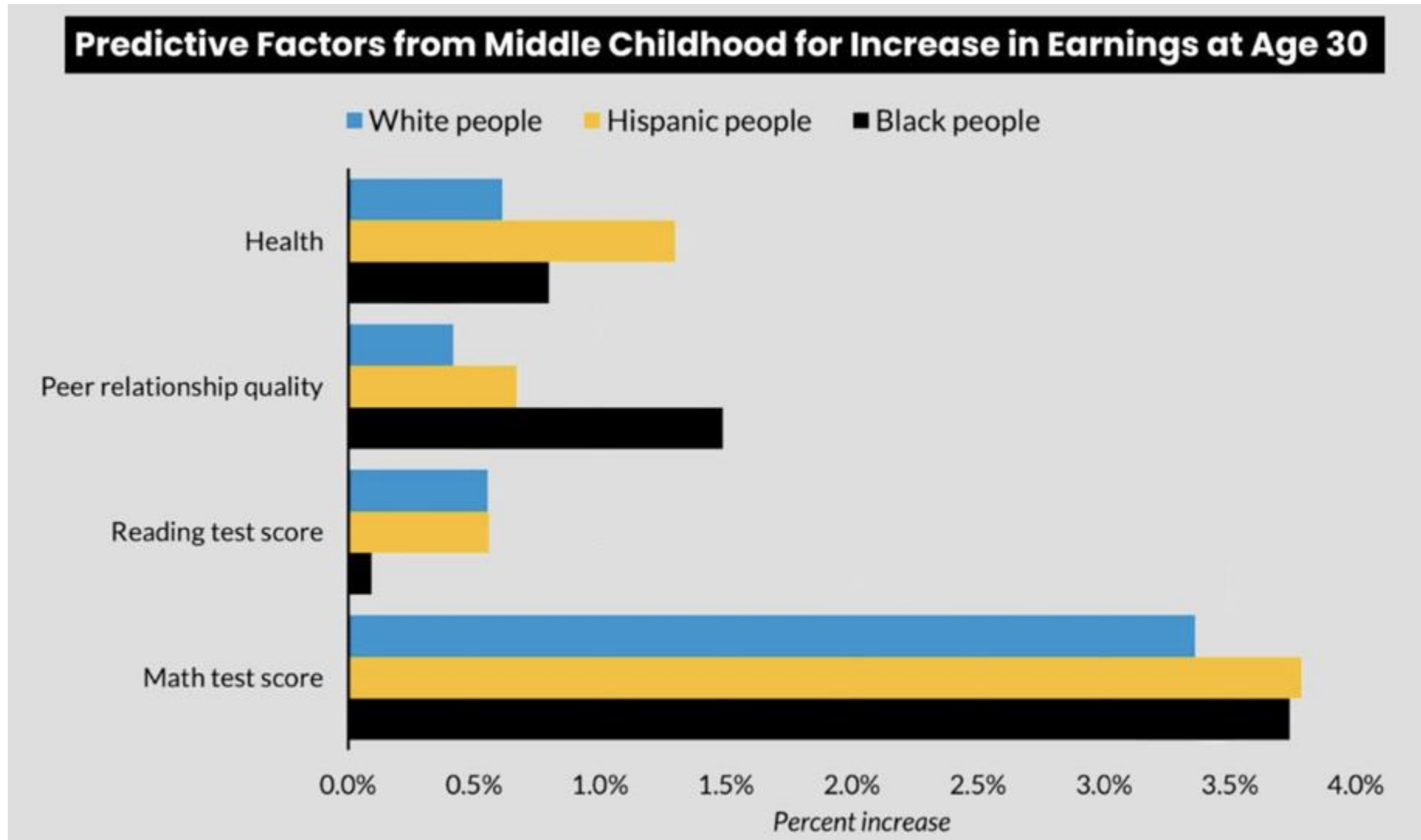
Math in the U.S. is in crisis

- 4th grade math scores remain low (NAEP 2024)
- Opportunity gaps persist for children of color and low-income children
- U.S. ranks 25th in math literacy globally

Early Math Matters for Academic Success

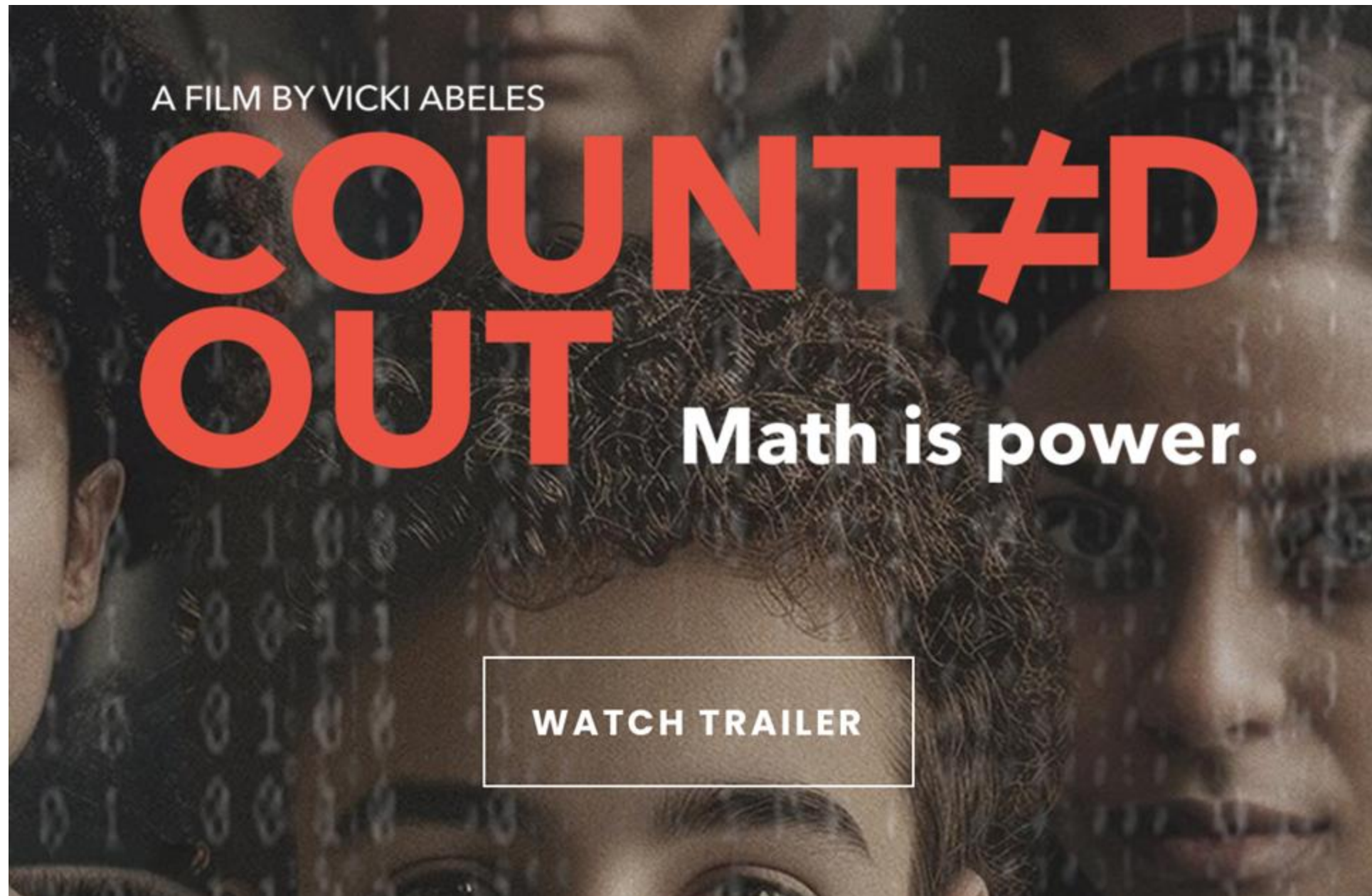


Math also matters for life success



*Urban
Institute,
2024*

Math also
matters for
society!



Family engagement matters for math outcomes

Four Types of Family Engagement Matter for Math Learning

1

High parental
expectations



2

Family involvement with
child's school

3

Parents' use of math
talk with their children

4

Quality home learning
environment (including
books, games and
puzzles)

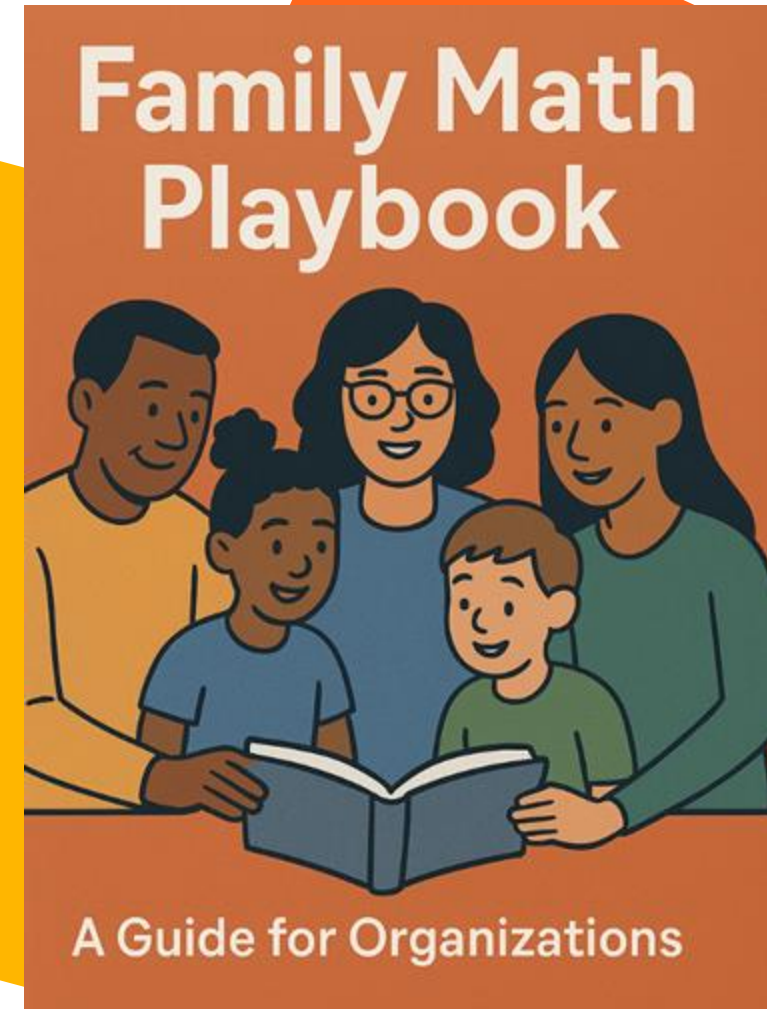
Family

engagement in
math learning
enhances their
skills, knowledge
and positive
attitudes towards
math and learning



The Family Math Playbook

The purpose of the Playbook is to help organizations integrate Family Math into their ongoing programming and institutional structure through shared understanding, capacity building, and strategic action. The Playbook supports reflection, planning, and implementation, empowering organizations to align Family Math efforts with their mission, elevate family voices, and advance equity.



Family Math Playbook

Reflect and Plan	Connect and Build Capacity	Design, Implement and Collaborate	Lead, Learn and Sustain
Get up to speed on current family math research and practice	Build staff and leadership capacity for family math	Co-design family math programming with parents and content experts	Conduct formative and summative evaluation
Situate family math within organizational mission, vision, and current programming	Build parent capacity and leadership potential for family math	Implement family math programming	Develop policies to support family math practices
Assess staff and family capacity for family math	Communicate family math to build awareness and shared understanding	Activate family math partnerships for co-design, outreach and co-leadership	Sustain family math efforts through funding, continuous improvement, and expansion



- **Reflect on how Family Math is currently reflected in your Family Engagement Practices and Policies** (in chat or come off mute).
- **Apply the Family Math Playbook framework to your current Family Math practices:**
 - Does it align with what we know about Family Math research and your school's overall goals?
 - Does it build educator and parent capacity for Family Math?
 - Were parents involved in the design?
 - How do you know it's working?

What Does Family Math Look Like in Practice?



1. Nurturing a culture of Family Math literacy at home

- Frequent “math talk” and family math interactions
- Sharing books, games, everyday activities
- Holding high expectations



**MAKE
IT MATH**



Promote frequent math interactions through existing programs

Consider existing Family Math programs that are:

- evidence-based
- developmental
- aligned with classroom instruction
- accessible (multilingual, bite-sized, use everyday objects, tech-delivered)



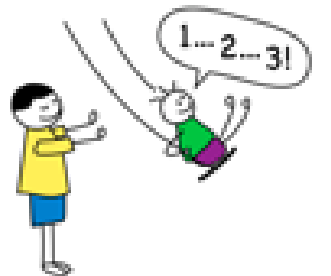
Encourage families to amp up math in books, games and everyday activities

- A good Family Math game has opportunity for open-ended conversation, features math content in a fun framework and allows various ages to play together
- In storybooks, the math can be implicit or explicit. Ask questions, encourage predictions, and explore math concepts and math-ish vocabulary.
- Math is context-embedded. Find and highlight the math in everyday routines like sorting socks, cooking, grocery shopping, or taking the bus.

**MAKE
IT MATH**
* ÷ ♥ =

YM | YOUNG
MATHEMATICIANS

**Early
Family
Math**



Where is the math in . . .

**Cooking
Shopping**

**Doing dishes
Mealtime**

Laundry



**What are you currently doing
and how is it working?**



5-minute **BREAK**



2. Partnering with family, school, and community around math

- Transparency about math standards, progress, and pathways
- Making “school math” meaningful and relevant
- Bringing families into school for math fun, for example through Math Nights and MathFests
- Activating community





Help Families Navigate Math Pathways

The Gate



Opportunity & Access

The Maze



Navigating Math Pathways

The Pace



Progress & Advocacy

Source: Just Equations

Math Night Ideas

- Sugar skulls and papeles picados
- Games Night
- Math of Food series
- Measure Everything!



Co-create a Family Math Games Night tapping Family Funds of Knowledge

- **Phase 1:** Brainstorm and Listen: Listen and learn from one another. What games do you play at home?
- **Phase 2:** Refine a Goal: What is the math content?
- **Phase 3:** Design and Implement:
- **Phase 4:** Debrief and Improve: What could we do differently next time?



Bring a Math Festival to your School or Community

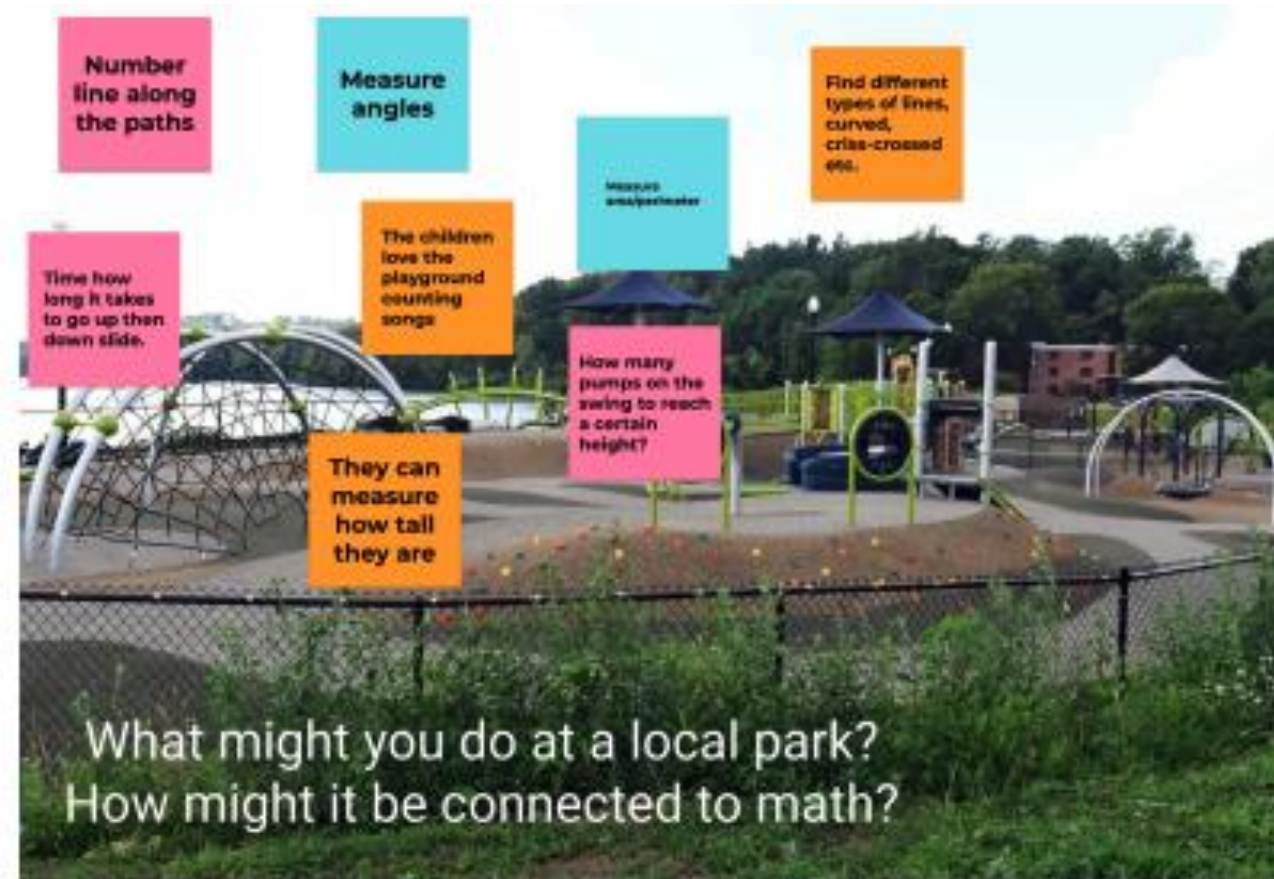


**Julia Robinson
Mathematics
Festival**



Co-design a Math Space or Math Trail with students or families

Use the schoolyard and surrounding neighborhood to explore math. Invite parents or students to contribute their knowledge.



**What are you currently doing
and how is it working?**



3. Changing the way we talk about math

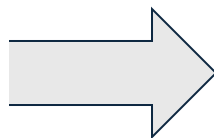
- from fixed to growth mindset
- from correction to curiosity
- from quitting to persistence
- from useless to relevant



Math beliefs and feelings need our help!

- **93%** of adults in the U.S. report some level of math anxiety
- Globally, **59%** of teens report that they worry about the difficulty of math classes, while 31% report getting very nervous doing math problems





The Math Narrative Project

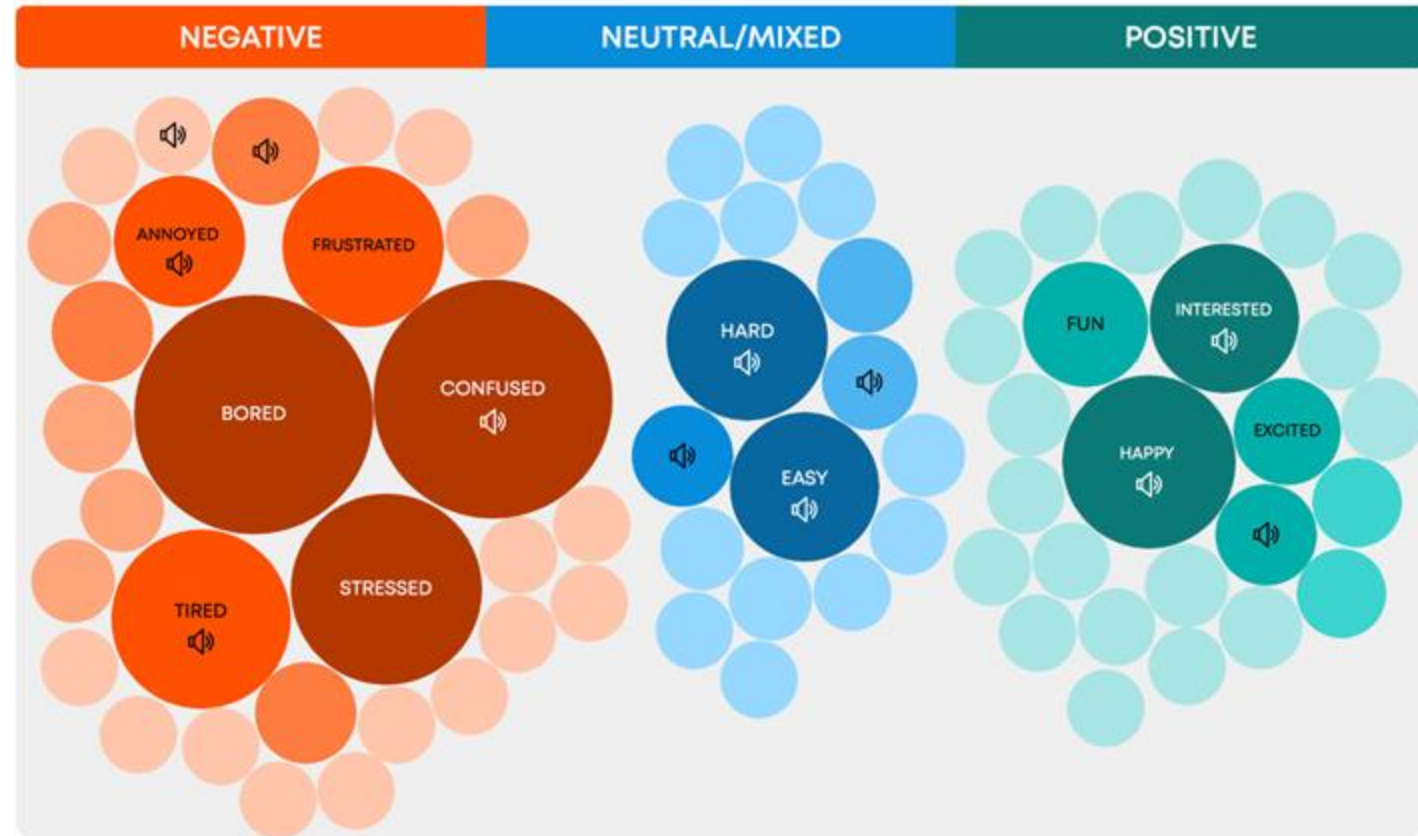
Message recommendations for parents:

- Elevate student agency
- Acknowledge real-world challenges
- Acknowledge emotions in math learning
- Make math relevant
- Affirm the value of mistakes
- Encourage help-seeking
- Reframe struggle and capability

How Students Feel About Math

ALL RACES

ALL GENDERS





What are Narratives That Support Resilience?

When you think this...

Try saying this instead!

Math is too hard!



I am NOT a math person!



I can't do this!



I'll never get this right!



**What are you currently doing
and how is it working?**





- **Action Planning #1**

-How might your school encourage Family Math at home? What's one idea you might try out?





- **Action Planning #2**

-If you were to design a Family Math Night or other event in your school or community, what would it be? How would you start?



- **Action Planning #3**

**-What's one way you could shift your math communications with students and families?
What communication channels and messages would you use?**

Wrap Up

In the chat, share an emoji reflecting how you feel about math after our conversation today...



We're here to support you!

- Free Family Math webinars
- A searchable online library of Family Math practical tools for educators and families
- A Family Math blog with voices from the field
- Research-to-practice briefs





Center for
Family Math

Find resources at:

familymath.org
nafsce.org



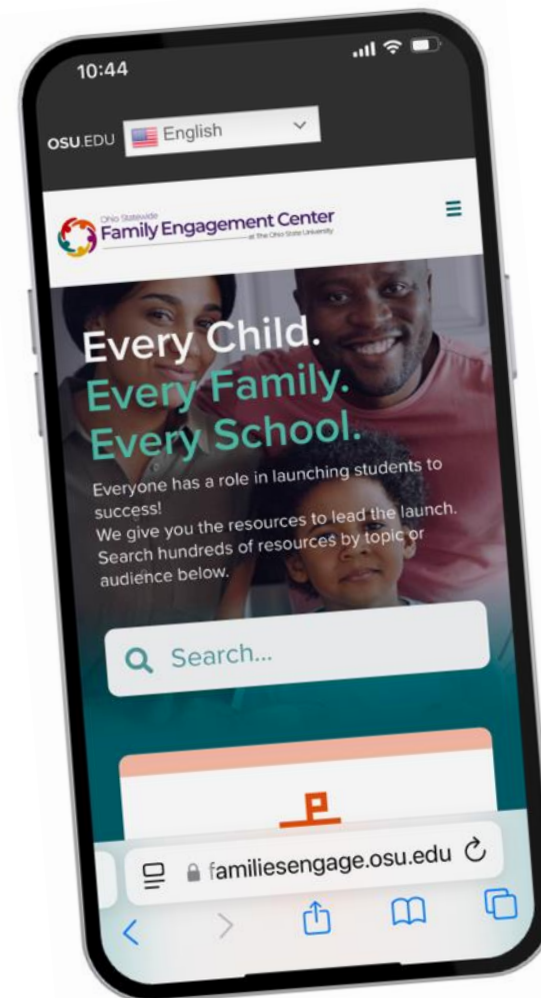
Ohio Statewide Family Engagement Center

Stay in Touch!

WEBSITE



- Seminars
- Research Briefs
- Family Resources
- Guides and Templates
- Podcasts
- Speaker Requests
- Modules
- Conferences and Events
- More!



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SURVEY TIME!

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