

We Are (Math) Family: Helping young children and families learn to love math together

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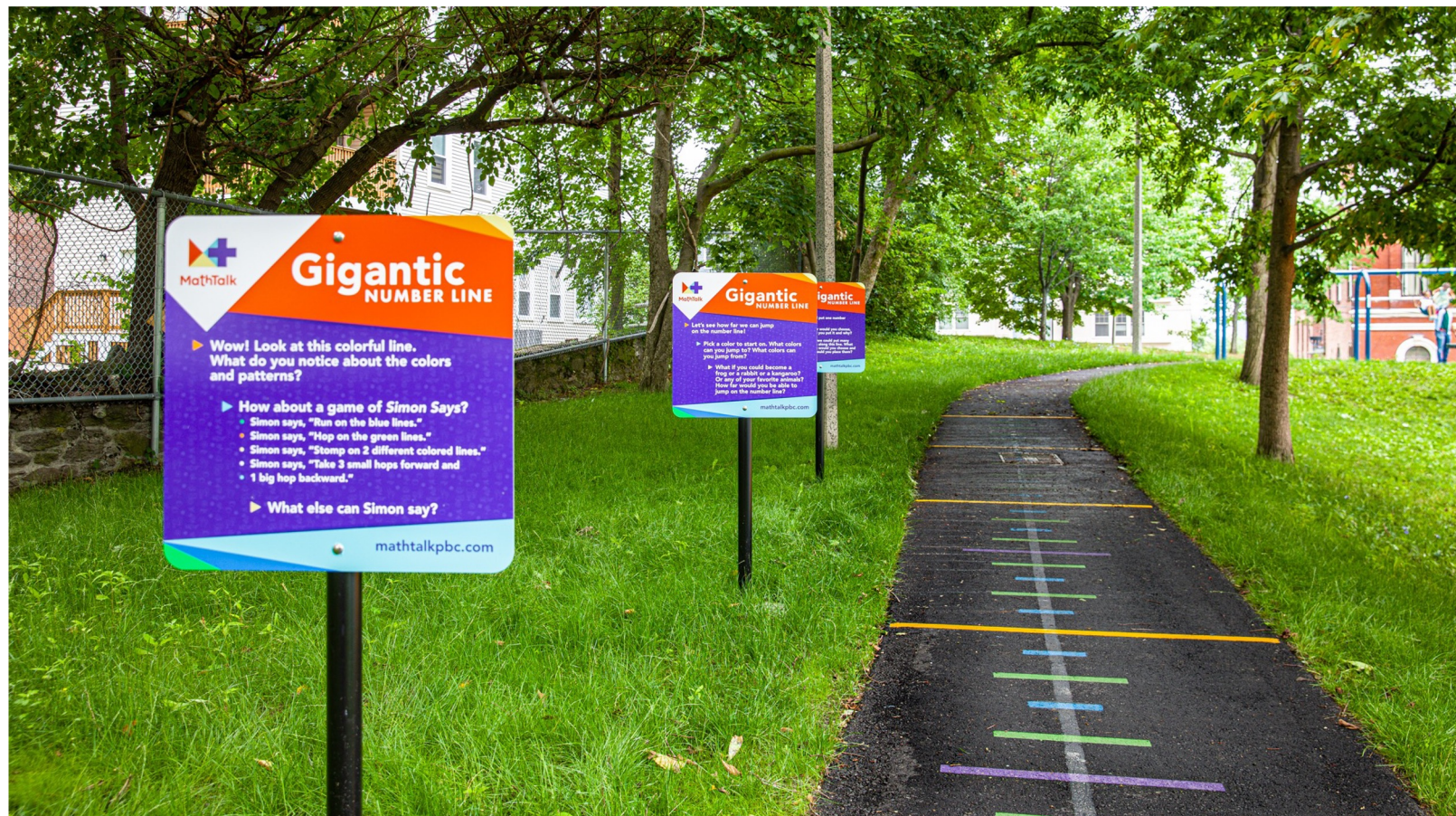
Agenda

1. Icebreaker
2. Why family engagement?
3. Some examples from our math work with families
 - Online (asynchronous)
 - In person (synchronous)
 - At home (asynchronous)
4. Some guiding principles for our math work with families
5. Applications to your work

Icebreaker

How might you engage children and families with this giant “number” line if it was in the hallway outside of your classroom or on your playground?







Gigantic Number Line

Gigantesca Línea Numérica

1

How far can you jump?
¿Qué tan lejos puedes saltar?

2

What if you had a running start,
how far can you jump now?
¿Qué pasaría si tuvieras un comienzo
corriendo, qué tan lejos puedes saltar ahora?

3

What do you notice about the spaces between
the colorful lines? What patterns do you see?
¿Qué notas sobre los espacios entre las líneas de colores?
¿Qué patrones ves?

4

If you hop on all the lines that are the
same color, which hops are shortest?
Which are longest?
Si saltas en todas las líneas que son del
mismo color, ¿qué saltos son más cortos?
¿Cuáles son las más largas?



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Gigantic Number Line

- ▶ Imagine we could put one number along this line.
- ▶ What number would you choose, where would you put it and why?
- ▶ Imagine we could put many numbers along this line. What numbers would you choose and where would you place them?

Math-talk.com

mathtalkpbc.com

Why family engagement?



- Families have powerful influence over their children's beliefs about math and about themselves as doers and learners of math -- for better or worse.
 - Family members often harbor anxieties about math that can be unknowingly and inadvertently transmitted.
 - Family members often don't know (through no fault of their own) what early math can and should look like.
 - By supporting families with math, we support children!

Exploring Family Math Examples



Becoming a Math Family Website

<https://becomingamathfamily.uchicago.edu>

[Home](#) > Activities

DISCOVER, PLAY, ENGAGE, and LEARN with your kids!

Search our database for activities to do with them!

Search by keyword



Child's Age

Mathematical Topic





Ready, Set, STEM! Family STEM Event “Passport”

<https://voices.uchicago.edu/readyssetstem/>



bitly



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MATH AT HOME

Ideas to help families support learning

- Playful math activities
- Connections to the real world

**Everyday
Mathematics**

The University of Chicago School Mathematics Project

BOOK 1

GRADE

K

**Mc
Graw
Hill
Education**

*Everyday
Mathematics*
Math at Home
Books

Exploring Examples



As you explore each family math example, discuss and chart:

- *What do you notice?*
- *What do you wonder?*
- *In what ways are families engaged or supported by the activities and other information?*

Engage in math together



In what way(s) did you see this principle in the examples you explored?

Engage in math together



- Give family members a role; be clear it is intended to be done together.
- “Piggy-back” math onto activities families already do together, as part of a daily routine.
- Encourage talking about math (provide open-ended conversation starters, questions, and prompts).

Spotlight foundational concepts and skills



In what way(s) did you see this principle in the examples you explored?

Spotlight foundational concepts and skills



- Help families realize the important math that comes BEFORE the math they may remember (symbols, equations, etc.)
- Help families see early math as more than counting.

Attend to feelings about math and math identities



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In what way(s) did you see this principle in the examples you explored?

Attend to feelings about math and math identities

- Helping families see *what math is* and *what math kids (and family members) are capable of* can change mindsets.
- Math is everywhere! Help families recognize and share the math they already do - maybe without realizing it.

Make math joyful and fun



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In what way(s) did you see this principle in the examples you explored?

Make math joyful and fun



- Math is more about exploration than answer-finding.
- Allow for self-pacing and choice based on interest and enjoyment.

Some Guiding Principles



- Engage in math together
- Attend to feelings about math & math identities
- Spotlight foundational concepts and skills
- Make math joyful and fun

Your turn...

Turn and Talk:

Think about an upcoming family engagement opportunity...how might you plan or tweak it to incorporate one or more of the principles?

- Engage in math together.
- Spotlight foundational concepts and skills.
- Attend to feelings about math & math identities.
- Math math joyful and fun.

Resources/websites

- Math-talk.com
- <https://becomingamathfamily.uchicago.edu>
- <https://voices.uchicago.edu/readystem/>

Thank you!



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<https://stemed.uchicago.edu/>

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