MAKE A STATEMENT WITH MATH

STRUCTURE

- Activity Overview & Preparation (10-15 MIN)
- Introduction (2 MIN)
- Activity & Discussion (20-40 MIN)
- Closing (5-10 MIN)

OBJECTIVES

At the end of this activity, participants will be able to:

- Reframe everyday comments into math statements

TIME

40-60 MINUTES

In this activity, caregivers revise everyday comments into math statements to model how math can be an intentional part of everyday conversations.

MATERIALS

Required:

- Index cards or paper to write everyday comments that caregivers might say
- Container (bowl or basket) to hold the prepared statements
- Pencils- one for each caregiver

Suggested

- Select 1-2 **Math Revealed** videos for caregivers to watch at home
- Make a sign with the activity steps
  - Take a statement
  - Read it silently, and turn it into a math statement
  - Share your statement with your partner or small group
  - Talk among your group to think of other ways to turn the everyday statements into math statements

ACTIVITY 3.4

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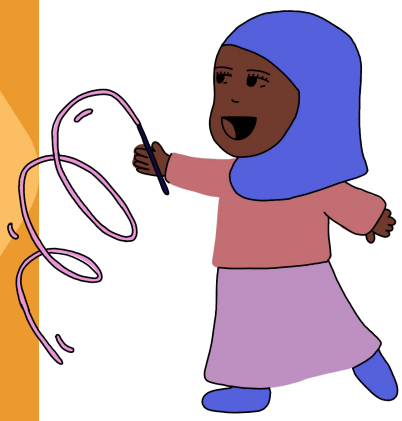
MAKE A STATEMENT WITH MATH

GETTING READY

FACILITATOR NOTES

BUILDING CAPACITY

This activity builds on the **Revealing the Math in Everyday Life** module, but does not require module completion. (Module 3, Segment 2)



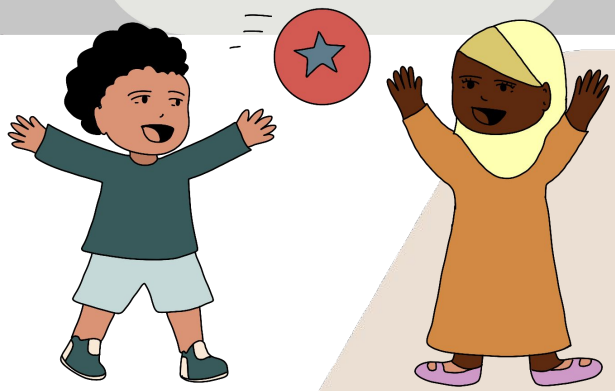
ADAPTATIONS

Use these ideas to modify the activity based on:

- child age,
- time and resources available for implementation
- caregiver needs.

TIPS

Blue text indicates something that facilitators might say (e.g.,"**Today we are going to explore math talk in our everyday routines**"). Regular text is information for facilitation.



ACTIVITY 3.4

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MAKE A STATEMENT WITH MATH

GETTING READY

ACTIVITY OVERVIEW

Caregivers may feel too busy to "add" math to their list of daily Activities.

By learning to embed math into everyday routines, caregivers can take advantage of naturally occurring opportunities to show children that math is useful, while also building their children's math vocabulary and encouraging mathematical thinking.

The "Make a Statement" activity helps caregivers practice turning everyday comments into math statements.

During this activity, you can help caregivers see the value of being intentional about finding opportunities to talk about math with their children, especially the math they are already doing but not yet talking about!

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MAKE A STATEMENT WITH MATH

GETTING READY

PREPARATION

10-15 Minutes

Before beginning the activity, you will need to know how many participants you will have. Write down enough statements (on index cards or paper - or use a printer to print them) so you have plenty for each person to choose at least two. Include extra statements to allow caregivers to choose another if they are unhappy with their first selection.

Fold the statements in half so the words cannot be seen, and then place them in a bowl or basket. Select one statement to use yourself, as an example, and remove it from the container.

Place the container in a place where all caregivers can reach it, or be ready to pass it around. You may use multiple containers if you wish.

Make a sign that notes the four steps listed in the overview guide [1.Take a statement; 2. Read it silently, and turn it into a math statement; 3. Share your statement with your partner or small group; 4. Talk among your group to think of other ways to turn the everyday statements into math statements].

If you are facilitating the group using an online platform, screen share a copy of the statements so caregivers can select one that is a good fit for them. Have them think of a way to change the everyday statement into a math statement, and ask for volunteers to share.

If you need additional support to gather ideas on how to turn an everyday statement into a math statement, visit:

https://dreme.stanford.edu/news/make-statement-math-how-get-kids-and-you-talking-about-math

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MAKE A STATEMENT WITH MATH

ACTIVITY

INTRODUCTION
2 Minutes

Introduce the activity. For example, you might say: **"Today we are going to look at some comments that may come up in everyday conversations, and work together to revise them to include math. The purpose of this activity is to be intentional about noticing math and talking about math with children to help them think mathematically, and build their math vocabulary."**

ACTIVITY & DISCUSSION

Part 1: 20-40 Minutes

Adult learners benefit from activities that involve "doing" rather than only "listening", especially if they have an opportunity to think about their own ideas. This "Make a Statement" activity requires everyone to revise everyday comments into math statements, first on their own, then in discussions in pairs or small groups, and finally, in whole-group discussion. This format helps caregivers generate ideas for turning everyday statements into opportunities to talk about and support early math. The small group portion of the activity facilitates participation by persons who might not feel comfortable speaking up during the whole group part of the activity. Sharing ideas in small groups means that no individual adult has to speak to the entire group.

Put the statements you prepared in advance into a bowl or basket and ask participants to take one.

"As I pass the bowl (basket) around, take one statement out and read it to yourself. We are going to turn these everyday statements into math statements."

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ACTIVITY

ACTIVITY & DISCUSSION

Part 2: 20 - 40 Minutes

Take one statement yourself from the bowl (basket), and use it to model turning it into a math statement, by reading the statement aloud and revising it, highlighting the math you incorporated.

"I'll go first. Here's my statement." [read pre-selected statement]

"Now, I'll turn it into a math statement."[provide example math statement]

"What is different about the two ways to say this statement?"

"What might your child learn about math from the second statement that they would not have learned from the first one?"

Give participants time to generate their own ideas for turning their statement into a math statement. Allow the option for writing down ideas, if appropriate.

"Now look at your statement. What are some ways you can turn it into a math statement?"

After caregivers have success with the statement they chose from the bowl (basket), encourage them to think of their own statements by asking what they often say to their children.

"What are some phrases you commonly use with your children? How could you turn them into math statements?"

Participants can pair up, form small groups, or remain as one large group — then share their ideas, and discuss new ones.

After ample time for sharing has occurred, discuss as a large group so everyone benefits from all of the ideas generated by individuals and small groups (if used).

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ACTIVITY

ACTIVITY & DISCUSSION

Part 3: 20 - 30 Minutes

One of the aims for this activity is to build caregivers' intentional efforts to engage their child in math talk. Celebrate attempts from caregivers to come up with math statements and emphasize that inserting math into everyday conversations may help their children think about math. Reinforce their success to empower them to continue to use this skill outside of the activity session.

CLOSING

5-10 Minutes

Incorporate these key take-aways in how you close the session with caregivers. You can state them as written, or paraphrase based on the caregiver's experiences.

- Caregivers can incorporate math comments in everyday conversations with their children.
- Caregivers can be intentional about using math vocabulary in their everyday experiences with their children.
- Math conversations with caregivers in the context of everyday activities supports the development of young children's math vocabulary and encourages mathematical thinking.

To help solidify learning, ask families to share one thing they learned about early math from this activity.

ADAPTATIONS

CHILD'S AGE

Consider the ages of the children in the families you work with. If the children are very young, such as toddlers, help caregivers think about how their conversation or statements with each age group might differ from math conversations or statements with an older child.

TIME & RESOURCES

If you have limited time to share the activity with caregivers, consider reducing the activity to focus on a limited number of statements from the bowl.

CAREGIVER NEEDS

If the caregivers you work with require accommodations to participate, be sure to support their needs by:

- Offering closed captioning
- Providing all materials in caregivers' native language (with translations when relevant)
- For caregivers who prefer to interact with materials without reading or who have low literacy skills, provide audio (you can record audio files or read materials aloud) and engage in discussion rather than requiring reading.
- Consider how statements might differ across cultural and linguistic groups. Support families in creating their own statements aligned with their cultural and linguistic realities.
- Review all of the statements ahead of time, and if any are not appropriate for the caregivers you work with, omit them. You may need to make a set of statements that a caregiver you work with might be more likely to say. The statements we provide are just a starting point, so caregivers can also think of statements from their daily routines after the first statement is used as an example.

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MATH SNACKS

CAREGIVER MATERIALS

SAMPLE STATEMENTS

"Time for bed."

"We have to catch the bus."

"I need you to put away these toys."

"Are you ready for school?"

"We need to go to the grocery store."

"All the ingredients go in this bowl."

"Please share the fruit snacks."

"I'll race you to the monkey bars!"

"It's your brother's turn."

“I’m noticing lots of animals here.”

“Look at the garden!”

This recipe calls for potatoes.”

“Those are street signs.”

"Our library books are due tomorrow."

"Did you brush your teeth?"

"Please put your dishes in the sink."

"Let's have our picnic over there."

“This puzzle piece goes here.”

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ACTIVITIES FOR FAMILY SUPPORT PROFESSIONALS:
EXPLORING EARLY MATHEMATICS

"Everyone Succeeds" was developed for Family Support Professionals to use with the families they serve. All activities are available at no cost, on the Institute of Child Development Math and Numeracy Lab website, for private use with families and caregivers. These materials may not be reproduced or distributed for any for-profit effort without explicit permission from lead developers, Drs. Wackerle-Hollman and Mazzocco.

Module 1: How Attitudes and Dispositions May Affect Early Math

- Activity 1.1 Everyone Succeeds
- Activity 1.2 Flipping the Script
- Activity 1.3 Mathitudes
- Activity 1.4 Learning from Math Mistakes
- Activity 1.5 Comments, Questions, and Conversations (CQC's)
- Activity 1.6 Attitude Adjustments
- Activity 1.7 We Are All Math People

Module 2: Math is Numbers and More: Exploring Early Math Topics

- Activity 2.1 Math Kaleidoscope
- Activity 2.2 Early Math Topics
- Activity 2.3 Picturing Math
- Activity 2.4 Measuring Up!
- Activity 2.5 Toddlers Under Construction

Module 3: Finding Math in Everyday Life

- Activity 3.1 Early Math Success Stories
- Activity 3.2 Math Snacks
- Activity 3.3 Becoming a Math Detective
- Activity 3.4 Make a Statement with Math
- Activity 3.5 Everyday Math in Action
- Activity 3.6 Routines Roadmap

These activities were developed by the Math and Numeracy Lab, directed by Michèle Mazzocco, Institute of Child Development (ICD), in collaboration with Alisha Wackerle-Hollman, Director of the IGDIlab, Department of Educational Psychology, both at the University of Minnesota. Contributors include ICD doctoral students Sarah E. Pan and Jasmine R. Ernst. This work was supported by Heising-Simons Foundation DREME Network Awards 2018-0670 and 2020-1777. We thank members of the Math and Numeracy Lab that contributed to this work, family support professionals who provided feedback or welcomed us (and our activities) into their classrooms, and our community partner consultants who provided insight on language selection and delivered illustrations to make this work meaningful to the Latine and Somali communities.

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