EVERYDAY MATH IN ACTION

STRUCTURE

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

OBJECTIVES

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

- Recognize the importance of intentional math conversations to promote the development of early math skills
- Be on the lookout for opportunities in everyday life to talk about math with their children

TIME

30-50 MINUTES

This activity promotes caregiver awareness of opportunities in everyday family life to be intentional about including math when talking with young children.

MATERIALS

Hidden Math Videos

ACTIVITY 3.5

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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)

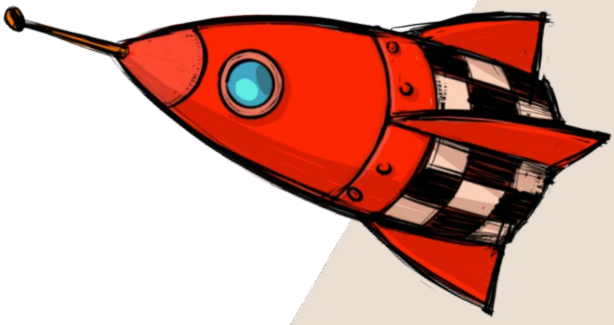
ADAPTATIONS

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 think about opportunities for talking about math with our children**"). Regular text is information for facilitation.



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GETTING READY

ACTIVITY OVERVIEW

In this activity, caregivers watch short videos that provide examples of opportunities in everyday life to notice and talk about math with young children. They then brainstorm ideas for inserting math conversations into their own family routines.

PREPARATION

(5- 20 Min)

Watch the hidden math videos and select two to share with the caregivers:https://innovation.umn.edu/math-numeracy-lab/early-math-information-for-parents-caregivers-and-teachers/

When meeting in person, arrange caregiver seats so that the caregivers can see a screen, whiteboard, or wall where you will show the videos. If you are facilitating the group in an online platform, screen share the selected videos. Provide the link to the videos so caregivers can watch them at home.

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ACTIVITY

INTRODUCTION
5 Minutes

Introduce the activity. For example, you might say: **""Today we are going to watch two short videos, which will help us think of opportunities to talk about math with our children. We will discuss how the examples in the videos could fit into your daily routines, and also explore other opportunities in everyday life to talk about math with your children."**

ACTIVITY & DISCUSSION
Part 1: 15-20 Minutes

Caregivers are busy, and may feel too busy to "add math" to their list of daily activities. By learning how to embed math into their informal conversations, caregivers can use naturally occurring opportunities to enjoy math, show that math is useful, and build their own, as well as their children's, math vocabulary and skills.

Begin the discussion by asking caregivers about the importance of talking about Math:

"Why is it important to talk about math with your children?"

ACTIVITY & DISCUSSION
Part 2: 15-20 Minutes

Guide the caregiver discussion to highlight the following key points:

- When caregivers talk about math with their children, they model their own use of math and support the development of their children's early math skills.
- Informal math conversations help children notice and explore different math topics, like measurement, patterns, shapes and spatial relations, numbers, and counting.

The videos present four strategies for deepening math talk with children. Discuss these with parents:

1. Notice the math.
Identify math topics. Be on the lookout for opportunities to talk about math.

- For example, when measuring the ingredients for a recipe; when sorting clothes for laundry by color; when counting how many cookies are left, and so many more.

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ACTIVITY

2. Talk about the math.
Engaging children in math conversation helps them build math vocabulary and skills.

- For example: "Take the rectangular block and see if it fits here."

3. Ask questions and have conversations.
Encourage deeper thinking by asking questions about the math topics.

- "How can we figure it out?"
- "What's another way we can try?"

4. Model and praise problem solving.
Focus on effort, and the process of problem solving, rather than whether your child answered correctly.

- "You are really figuring that out!"
- "How can I use this ruler to figure out if it will fit in the box?"

ACTIVITY & DISCUSSION

Part 3: 15-20 Minutes

Watch the first video together and apply the four strategies. For example, in the case of the grocery store video:

"In the grocery video, there are examples of dialogue between a caregiver and child that might happen while grocery shopping. There are examples of comments a caregiver might make, and questions caregivers may ask their child, to show how a caregiver and a child can have an informal conversation about math while grocery shopping together."

Watch the next video together and then divide the caregivers into small groups.

"In your small groups, discuss how math conversations, like the ones in the videos we watched together, could fit into the daily life of your family."

"Would math conversations like the ones in the videos fit your everyday routines?"

"Can you think of other informal opportunities during the day to talk about math with your child?"

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ACTIVITY

Come back to a large group and brainstorm the following:

"Can you think of places or activities in which you see yourself using math with your child?"

- when out and about (e.g., on a walk, in the car, etc.)
- around the house (e.g., cooking, getting dressed, etc.)
- during playtime (e.g., card games, puzzles, etc.)
- during story time

One of the aims for this activity is for caregivers to build skills in noticing the math around them, and having math conversations with their children. During the activity, provide encouragement and celebrate caregivers' ideas for incorporating math into their everyday family life.

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.

- Children benefit when caregivers are intentional about noticing the math in everyday situations and talking about math with their children.
- The videos we watched today show some examples of how to incorporate math into conversations with your children, and you're leaving today with some additional ideas. Make sure to pay attention to your child's interests and do not force the conversations. If your child is not interested in counting plates while setting the table, just try something else.

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

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EVERYDAY MATH IN ACTION

ADAPTATIONS

CHILD'S AGE

Consider the ages of the children in the families you work with. Help caregivers to think of opportunities to talk about math with different ages.

TIME & RESOURCES

If you have limited time to share the activity with caregivers, consider reducing the activity to focus on just one video.

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)
- Consider how comments, questions and conversations might differ across cultures and languages. Support families in personalizing how they talk about math to be culturally and linguistically responsive.

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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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