

# Early Math Interest Forum Book Club

Co-facilitators Stephanie  
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- <https://docs.google.com/document/d/1GArGfBeCZ0MRUC6kpZ8XM22JmrCEEiI58DDGqcZ6Grc/edit?usp=sharing>

Handout for tonight's presentation. Please pull this up so that you can access the virtual manipulatives and other tools.

# What We Do | EMIF Goals

Promote high-quality mathematics learning opportunities for children 0-8 by providing opportunities for early childhood educators to:

- **network** with others about investigating big ideas in early mathematics content and connections to later math
- teach **mathematics as a creative endeavor**
- explore and use **developmentally appropriate** classroom and family **materials**
- promote **family engagement** in early mathematics
- address issues of **equity and access** to early mathematics
- promote a **positive mindset** to math in adults and children
- share **professional development resources**
- discuss recent **research**



# Our Work

- **Bimonthly Virtual Meetups** - 1 hour workshops on topics of interest, research, or work being done by EMIF facilitator or EMIF member
- **Book Club Meetings** - 1 hour meeting every other month (not the same month as a meetup)
- **Monthly Math Picture Book of the Month** - written by an EMIF member and posted on HELLO (NAEYC discussion board)

The logo consists of the words "What", "We", and "Do." stacked vertically in a large, bold, blue sans-serif font. A thin vertical line is positioned to the right of the text.

# Join the Early Math Interest Forum



1. Visit <https://members.naeyc.org/eweb>.
2. Log in using your NAEYC Member ID and Password.
3. Under “**Account Links**” section on the right hand side of the page, click **'Interest Forum Opt in/out'**”
4. On the Interests page, click the box next to **Early Math Interest Forum**. *Don't forget to click “Save”.* (Please note: It takes around 30 minutes for changes to apply in Hello.)
5. Join in on the conversation on the HELLO platform ([hello.naeyc.org](https://hello.naeyc.org)) and with the EMIF Community.

# Join the EMIF Listserv and Follow Us!

Subscribe here -

<http://bit.ly/EMIFListserv>



@naeycearlymath



fb.com/NAEYCmath



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# The EMIF Facilitator Team

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# Introduction to *Embracing Math*

Children are naturally curious about math.

- Teacher steps in to connect observations, questions, and ideas in a concrete way.

Teachers must cultivate safe, supportive learning spaces.

- Empower children to explore, take risks, and try new things.

Collaborative learning experiences are more effective than individual work.

- Working with peers allows children to see and hear a variety of math approaches and representations.

Children are valid contributors to math teaching and learning.

- Every child has a unique set of ideas, interest, strengths, and funds of knowledge to draw upon.



# Breakout Room Note Taker

## Breakout Rooms:

[Room 1](#)

[Room 2](#)

[Room 3](#)

[Room 4](#)

[Room 5](#)

[Room 6](#)

[Room 7](#)

[Room 8](#)

## Directions:

- Find the Breakout Room number your group has been assigned. **Make sure to only type on your group's assigned slide.**
- As a group, discuss the prompts and **record your notes in the Group Notes box.**

[https://docs.google.com/presentation/d/1KaN\\_x5G36n02qa4HEInjRKOKqehKTEFw8NFWNJsiioc/edit?usp=sharing](https://docs.google.com/presentation/d/1KaN_x5G36n02qa4HEInjRKOKqehKTEFw8NFWNJsiioc/edit?usp=sharing)

# Ch. 1 Open Ended Materials

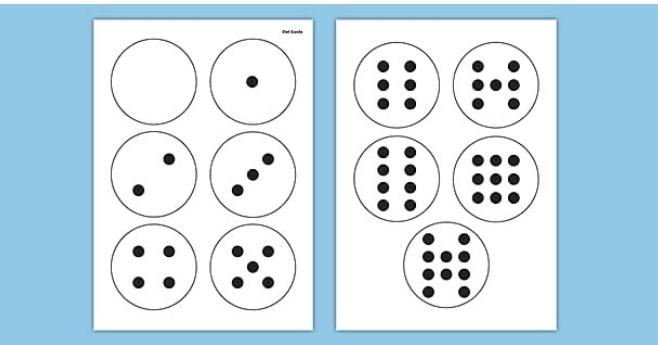
Found and recycled materials offer endless opportunities for children to invent different uses for the same materials over and over.

1. What are your favorite commercial manipulatives for math?
2. What are your favorite reused or upcycled materials for math?





## Ch. 2 Subitizing Tasks



- **Perceptual subitizing** is the immediate apprehension of the number of objects in a small set (usually up to 4 objects) without counting.
- **Spatial subitizing** is recognizing a spatial arrangement of dots immediately such as dice or domino configurations.
- **Conceptual subitizing** (chunking) involves grouping sets of dots then combining the sets.

# Magic Ten (p. 16)

**What you need:** Ten dice and a ten frame for each player.


**How to play:** Children start by rolling all 10 dice at the same time. The most common number a player rolls becomes their “magic number,” and those dice are all placed on the player’s ten frame. Children roll their remaining dice. Each time their magic number is rolled, the die is placed on the ten frame. Players keep rolling the remaining dice until their ten frames are filled with their magic number. Children can roll and race in pairs, if desired.



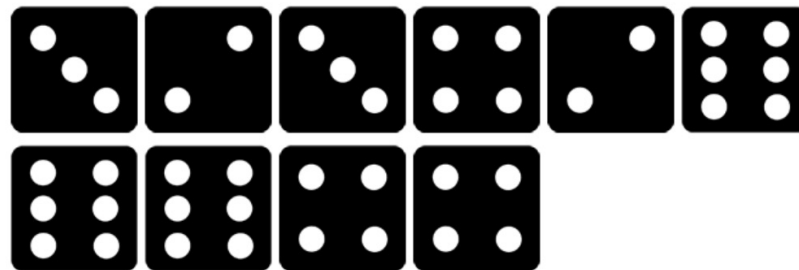
How does this game support subitizing? How does it help children embrace math?

# Let's Try Magic 10


<https://www.calculator.net/dice-roller.html>

1. Select 10 dice. 
2. Roll. The most common # is your Magic #.
3. Roll. Count how many of your Magic # you got. “Set aside” those dice from your original 10.
4. Select your new number of dice. Keep rolling and “setting aside” the dice with your Magic # until you’ve got all 10!

## Virtual Dice Roller



Number of Dice:



# Domino Parking Lot (p. 16)



How does this game support subitizing? How does it help children embrace math?



What other subitizing games from the book are you excited to try?

- Please give a short description or link in the chat.

# Ch. 3 Using Children's Names to Build Number Sense

*One of the most important words that children will learn to read and write is their name.*

## Five Frame Names (p. 19)

What you need: children's names written in a five or ten frame (one letter per square), small manipulatives

How to play: Children place a manipulative on each square that contains a letter of their name. Talk about the number of letters in relation to the number 5 and the number 10. "Whose name is equal to five? Whose is less than 5? How many less than five is Aki's name?"

How does this game support counting? How does it help children embrace math?





What other favorite name games do you play that relate to counting, graphing, or sorting?

- Please give a short description or link in the chat.

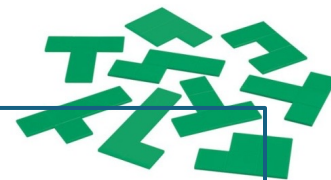
# Ch. 4 Playing with Shapes Using Pentominoes

<https://polypad.amplify.com/lesson/pentomino-zoo>

Grid Puzzles (p. 22)

What you need: pentominoes, grid paper

How to play: Children fit pentominoes together without leaving empty spaces between them, to create four-sided shapes. If desired, have them trace their shape and trade with a friend who tries to fill the shape with pentominoes.



How does this game support spatial reasoning?  
How does it help children embrace math?



# What other games with pentominoes did you like?

- Please give a short description or link in the chat.

# Ch. 5 Creating Coding Stories and Games

## 1. Make a grid.

- Use a floor graphing mat or create your own grid with masking tape & tablecloth

## 2. Choose your story, gather props, put character/places on grid.

- Gingerbread man props (gingerbread man, wolf, cow, etc.) and pictures to represent the places the gingerbread man travels to in the story (cottage, lane, field, lake)

## 3. Lay out the commands.

- Index cards or sticky notes with commands (directional arrows that point up, down, left, right).

## 4. Choose who will be the programmer (gives the coding commands) and gamer (follows the coding commands).

## 5. Code the story.

- Programmer sets up the command cards “Go up 1. Go forward 2. Go down 3.” to make a path that retells the story. The gamer moves the gingerbread man along the grid from start to finish as the story is told by the class and the code commands are given.





Code & Go Robot Mouse

## Sequence and Order

Page 10

Have you ever lost something and had your parents tell you to "retrace your steps?" Sequence and order are important in coding because they make sure everything runs smoothly and happens in the correct order. Just imagine if we put on our pants before our underwear!



# Books that Introduce Coding

- If I Were a Wizard (Hamilton, 2017)
- Hello Ruby: Adventures in Coding (Liukas, 2015)
- Mapping Penny's World (Leedy, 2000)





## What other favorite coding activities do you enjoy?

- Please give a short description or link in the chat.

# Wrap Up



- What activities from Chapters 1-5 are you excited to try?
- Next book club meeting will be June 26!



# Upcoming Events - May Virtual Meetup

**naeyc**  
Early Math  
Interest Forum


Join us for the next Early Math Interest Forum Virtual Meetup!

**STEM and Storytelling - Parallel Plotlines**



Facilitated by Ruth Spiro, Children's Author  
**May 7, 2024 at 8:00 ET**

Many of the skills that are critical for growing strong readers are also core skills in the study of science and math. In this session we'll look at children's picture books and discover how they connect to the foundational elements of STEM, including sequencing, pattern recognition, and more.

Register at  
[bit.ly/EMIFMay2024](https://bit.ly/EMIFMay2024)  
or scan the QR code.



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