Using Math Talk to Support Learning

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Annual Meeting
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Agenda

• Using Math Talk to Support Learning
• Developing Math Talk Through Number Talks
• Number Talks for Young Children
Learning Intentions

We will…

• Deepen our understanding of how math talk supports learning

• Identify ways to intentionally plan for math talk during everyday activities.

• Explore Number Talks as a more formal structure to support math reasoning and math talk.
Using Math Talk to Support Learning
• What might math talk sound like in the preschool classroom?

• When might math talk happen?
Some Examples of Math Talk

“You have 2 eyes and so does your bear. Let’s count: 1, 2”

“I have more crackers than you do. See, I have three and you have two. I am going to eat one of mine. Now I have the same as you!”

“That’s the third time I heard you say ‘mama.’ You said ‘mama’ three times!”
When, and in what ways, does Ms. Dejesús use talk to capitalize on everyday opportunities to support math learning with her young students?

https://www.youtube.com/watch?v=TLmm3U0eYX4
Three Important Findings

(1) **Teacher-Child Interactions Around Number Sense**: The more you talk about numbers with children in everyday contexts and settings, the more they learn about numbers. (connections between numbers and quantities)

(2) **Math Communication**: Math talk, opportunities for children to share their reasoning out loud, is significantly important to young learners’ mathematical growth.

(3) “**Good fit**” interactions during play. Teacher provides the “just right” amount of support that is aligned with what children are doing increases mathematical thinking.
Being Intentional About Supporting Math Talk

• Engage children in talk about numbers, counting, measurement, size, and shape throughout the day.

• Find ways to encourage math talk in every center in the classroom.

• Ask children to explain how they solved a math-related problem.

• Encourage children to talk about their thinking when they make a mathematical mistake.
The Cookie Game

Materials
• Counters “chips”
• Plate
• Paper circles or work mat of “Cookies”
• Die

Directions
Work in pairs.
1. Roll the die.
2. Put that number of chips on the plate.
3. Put chips on the cookies given the rule:
   “No more than 4 chips per cookie.”
Planning for Intentional Mathematical Learning

While children play The Cookie Game, how might we as teachers:

• Support number sense?
• Encourage math talk?
• Capitalize on “good-fit” interactions?
As we consider a renewed focus on the importance of communicating mathematical thinking with young learners….

What steps might we take as early childhood teachers to ensure an increased use of math talk with our children?
Number Talks:
A Platform for Numerical Reasoning
What Are Number Talks?

- Five- to fifteen-minute classroom conversations around purposefully crafted computation problems.

- The problems in a number talk are designed to develop children’s number sense and fluency.

- They are meant to be engaging and a fun!

Number Talk Norms

• There are many ways to see, or do, any problem.

• Everyone is responsible for communicating his or her thinking clearly so that others can understand.

• Everyone is responsible for trying to understand other people’s thinking.

--Humphreys & Parker, 2015, p. 14
How many dots are there? How do you know?

1. Discreet “thumbs up” when you know.
2. Use fingers to show how many different ways you know.
3. Be prepared to share with a partner.
Number Talks for Young Children
Number Talks for Young Children

Focus on

• deepening children’s understanding of quantity.

• developing children’s number sense.

• providing opportunities for children to share their thinking and reasoning out loud.
Watch for my finger flash!

• How many fingers do you see?

• How do you know?

https://www.youtube.com/watch?v=8sHpKd_Rx5A
Encouraging Children to Talk

Suggestion:
Start with an image and ask children to explain their thinking.

How many do you see? How do you know?
Predict with your partner how the children in Ms. Keenan’s class might explain how many dots they see?

How are the tools and models Used to support math talk?

How does the teacher support math talk?
Interested in learning more?

Book: Number Talks: Helping Children Build Mental Math and Computation Strategies

By Sherry Parrish
Interested in learning more?

http://mathperspectives.com/number-talks/

and sense-making as well as transform the culture of the classroom to one of inquiry and curiosity.

What is a Number Talk?

A Number Talk is a short, ongoing daily routine that provides students with meaningful ongoing practice with computation. A Number Talk is a powerful tool for helping students develop computational fluency because the expectation is that they will use number relationships and the structures of numbers to add, subtract,

Blacklines for Number Talks

Click to download:

Dot Cards
Number Shapes
Interested in learning more?

Oakland Elementary School
McDonough GA

http://schoolwires.henry.k12.ga.us/Page/73087
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