Mathematically Speaking!!!!

Our recent speaker at the Fall Project Construct Conference was Allen Rosales, author of *Mathematizing: An Emergent Math Curriculum Approach for Young Children*. He defines *mathematizing* as the process of understanding math within the context of children’s daily lives. (Rosales, 2015). Mathematical thinking is at the heart of our earliest life events…we record and proudly share birth weight, length, time and date of birth. Early on we begin to help children make connections between their natural exploration of their world and development of language and mathematical thinking. How many crackers do you need? A toddler will almost always put out both hands, giving voice to “Oh, you want two crackers!”—beginning his/her connection to words and numerical understanding. Rosales challenges us to observe, connect and reflect with children during play. Think about how many opportunities you have throughout your children’s day to make these connections.

We can facilitate children’s ongoing development of mathematical thinking by observing children during play and responding with creative materials related to their interests and by engaging in interactions to extend and enhance their understanding of mathematical concepts. Be mindful of offering rich and varied vocabulary words around the concepts being developed, for example, size. Providing children with materials of differing sizes and/or literature depicting concepts helps them make connections to things that are mammoth (large, big, gigantic, colossal, massive, jumbo) in comparison to things that are minuscule (tiny, teeny, small, little, miniature, petite).

We can assess children’s understanding by posing high level questions which require children to prove their understanding of the concept. Questions should range in complexity depending on the child’s level of development. I often use my own wonderings as a way to instill curiosity in children and engage them in higher level thinking. I am wondering, “How can we find out how many minuscule wooden cubes it would take to equal the height of the tallest tower we built today?”

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Welcome to Lambie’s Library! Sharing books with children builds rich vocabulary, high level language skills, problem-solving, and critical thinking skills, as well as, great imaginations! We are sharing our wonderings and our knowledge about the world with each other. These are a few of our current favorites.

**Turtle Splash!: Countdown at the Pond**  
By Cathryn Falwell  
Beautifully illustrated book about pond life which develops the concept of counting down from 10 to 1. Rich vocabulary!

**Earnest the Moose Doesn’t Fit**  
By Catherine Rayner  
Love the rich vocabulary introduced such as “squidged, squodged and squeezed in backwards.” Children will relate to Earnest’s problem and marvel at his problem-solving skills!

**Tuesday**  
By David Wiesner  
Time and imagination! Great book for introducing the concept of time and engaging children in language utilizing a no-word book.

**How Much Does a Ladybug Weigh?**  
By Allison Limentani  
ISBN: 978-1-91071611-3  
Limentani introduces children to concepts of weight, numbers and comparisons in this a beautiful picture book.

**Quote for today:**  
The goal of education is not to increase the amount of knowledge but to create the possibilities for a child to invent and discover, to create men and women who are capable of doing new things.  
Jean Piaget

We can also facilitate children’s understanding of mathematical concepts by helping children reflect and clarify their thinking using mathematical concepts throughout their conversations and writings. Posing questions helps children expand their thinking and include rich details needed to communicate with clearer intent. For example, “I see you drew a picture of the baby bird falling out of the tree. How far do you think the baby bird fell from the tree? Could you add that to your story? If you were a bird, how would you make a safer bird’s nest?”

Although opportunities to engage in mathematical thinking occur around us throughout the day, it is our responsibility to reflect on children’s interest and understand the mathematical concepts being developed. It is our job to create experiences, offer materials and pose questions that will extend and enhance their understanding of the concepts presented. This takes time and an understanding of where children are in their development.


**Additional Professional Resources:**
