Conversations that Nurture Mathematical Thinking

"Math can be a seamless part of your child's play, but it truly blossoms in a supportive environment in which you provide challenges, suggestions, activities, and vocabulary."

(Douglas Clements and Julie Samara, Math-Multiplying Play, *Early Childhood Today*)

When you talk with a young child about how she is playing or what she is doing, you help her become aware of mathematics and build a mathematical vocabulary. Use words that encourage the child to compare, count, predict, problem solve, reason and make connections to the world around her. ***Use the language of mathematics!***

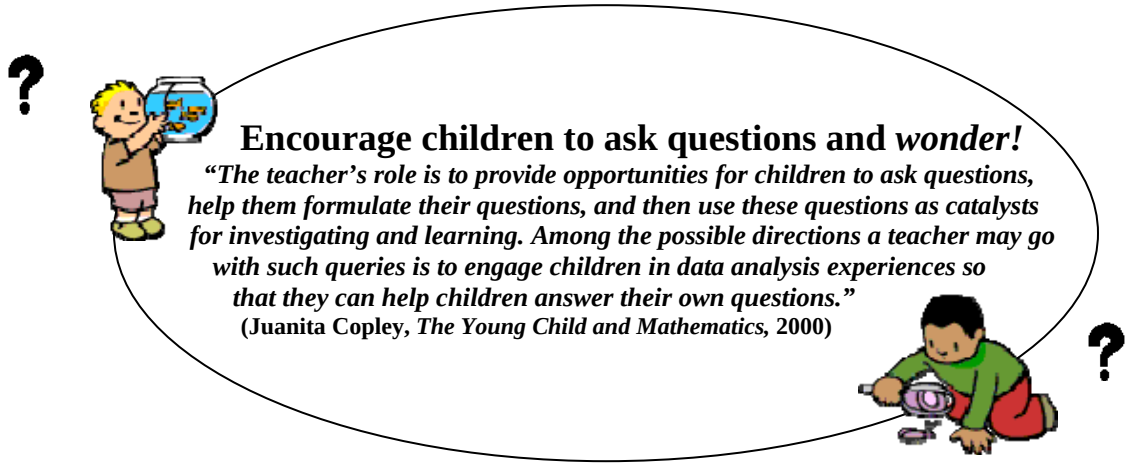
Math Terminology	Position & Space	Measurement & Comparison
circle, triangle, square, rectangle, oval, star, rhombus (diamond), hexagon, trapezoid/ cube, sphere (ball), cone, pyramid number, pattern, problem, predict, estimate, sort, measure, symmetry, map, match, group, half penny, nickel, dime, quarter, dollar/ clock, hour, minute, day month, year one, two, three…	high/medium/low front/back/side up/down right/left far/near over/under on/off in/out inside/outside in front/behind around through above/below between middle	longer/shorter taller/shorter wide/narrow higher/lower heavier/lighter curved/straight warmer/colder bigger than/smaller than greater than/less than holds more/holds less faster/slower wider/narrower same/different just as many more than/fewer than twice as many

Prediction	Cause & Effect	Joining	Separating
could happen might happen	because since	put together in all total	take away are left remove

compiled by Judy Ballweg, MMSD PreK Math Resource Teacher, 2007

Probability	Verification	Time & Force
sure/unsure likely/unlikely maybe impossible	check correct agree disagree	slow/fast heavy/light sudden/smooth strong/weak tense/loose

- ***Model mathematical Behavior!*** Stress the importance of learning. Model the joy of mastering tasks. Value errors as essential information to help us learn. Talk about what you are doing as you grocery shop, cook, balance your checkbook, pay bills and count money from the ATM. Think out loud as you use math to solve problems, explain an idea or plan for a project. Display *your* sense of ***wonder***…
- Name groups of things in the environment using number and shape names. (i.e., "Look at those *three* funny Jack-O-Lanterns. What *shape* are eyes ?")
- Discuss what happened long ago and far away.
- Ask her to reflect on her day and plan what she will do tomorrow.
- Encourage her to talk about procedures (i.e., "My game piece is on the number 4." "I need to roll a two to catch up to you." "We still have a long way to go to the end!")
- Provide opportunities for her to listen to others (peers and adults), comment, and formulate questions about what she sees and hears.



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