

Playing with Math

Mathematics helps children make sense of the world around them and find meaning in the physical world. When children play with math in their everyday lives they can grow up loving it. The National Council of Teachers of Mathematics (NCTM) developed a set of standards for teaching and learning math. There are two categories: *thinking* math standards and *content* math standards. The four thinking math standards are: problem solving, communication, reasoning, and connections. Content math standards are: estimation, number sense, geometry, space, measurement, statistics, fractions, patterns, and relationships.

Children have a natural curiosity and learn by asking questions. Caregivers can use this natural curiosity to help promote problem solving, since problem solving is the key to being able to understand all other aspects of mathematics.

- ❑ Ask your children to come up with solutions to everyday situations. Encourage your children to suggest problems and ask questions. Your children will learn how to figure things out— an important skill for success in math.

Patterns are things that repeat and relationships are things that are connected by some kind of reason. Patterns and relationships are found in music and art, as well as counting and geometry.

- ❑ Help your children find patterns in pictures, in movement, and in events such as the days of the week or seasons of the year.
- ❑ Try stringing beads, wooden blocks or pasta shapes into simple patterns. Start with two different colors and shapes. Progress to more complex patterns as children get older.



Measurement is an important way for young children to learn how big or little things are, and how to figure that out. Time is another concept that that is measured: in hours, days, weeks, and so on.

- ❑ Let children pick their own unit for measurement. Example: "Ramon is 5 cereal boxes high."
- ❑ Talk about time with concrete events like "after lunch" or "before bedtime" since young children will understand this better than "in ten minutes."

Fromboluti, Carol Sue and Rinck, Natalie, Early Childhood: Where Learning Begins: Mathematics U. S. Department of Education, National Institute on Early Childhood Development and Education, June 1999.

The San José Public Library would like to thank the following for their support of the Books for Little Hands program: City of San José Healthy Neighborhoods Venture Fund, FIRST 5 Santa Clara County, Federal Fund for the Improvement of Education, Community Foundation Silicon Valley, Children's Discovery Museum, and the San José Public Library Foundation.