SEEING GROUPS: SUBITIZING

What is subitizing?

The ability to "see" or recognize numbers instantly in a variety of number arrangements (called arrays). The dot patterns on a die, for example, can be instantly recognized as a group of numbers without individually counting the dots.

Why is it important?

Subitizing is the basis for rational counting, and is a specific skill that is embedded in the key preschool idea of cardinality [understanding that the last counting word named is the amount for the entire group]. *Subitizing* is also a "shortcut" for manipulating groups of numbers, as in adding 2 + 2 and later on, in understanding multiplication. Games are particularly good tools for teaching subitizing, and also for observing and assessing children's growing abilities to master the idea of quantity. The skills of *counting on* and *counting back* that many older preschoolers and kindergarteners begin to master include the idea of subitizing.

Preschool children typically can subitize quantities up to 5, but even infants can recognize the differences in small quantities, such as 1 or 2 of something.

Subitizing is already embedded in many everyday preschool activities. By raising awareness of the importance of subitizing, recognizing it when it occurs, and purposefully designing activities that reinforce this concept, preschool teachers help children build important foundations for later skills in operations and algebra.

Tools for Teaching Subitizing:

Math for ME includes many tools for teaching subitizing. These include: 10 Frames, 2 sided counters, various sizes of dice, number cards, small manipulatives, games and organizers. Grid games, short path games and long path games (introduced in Unit 4) are excellent resources for introducing, expanding, and assessing the skill of subitizing.

Home/School Connections:

Even though the word *subitizing* may not be a familiar one to many families, the idea of "seeing numbers instantly" can be reinforced at home in many ways.

Connecting with families: Playing a game that reinforces subitizing.

The following link can be shared with families. Alternatively, you can send home simple 5 frames and small inexpensive items with children in a folder or bag for families to play along with game instsructions.

https://www.naeyc.org/resources/pubs/tyc/dec2017/backpack/family-math-game-subitizing

Resources and references:

Charlesworth, R. (2012*). Experiences in Math for Young Children (6th Edition*). Boston, MA: Wadsworth Press
Kamii, K. (1982) *Number in Preschool and Kindergarten.*
Teaching Young Children (December, 2017). Backpack series: Family math games. Washington, DC: NAEYC.
The Learning Trajectories Organization (Douglas Clements) – Search for Subitizing Activities
http://www.learningtrajectories.org/