

Going to the Park—Ordering and Patterning

What the Research Says

- When adults help children focus on and explore mathematical concepts and relationships during play (for example, discussing objects' geometric shapes; helping children count how many blocks are stacked in a tower), experts call this “mathematizing” the child’s world in ways that promote mathematical learning and development.
- For young children, mathematics begins with the language and science of understanding patterns.
- Patterns are based on understanding part-whole relationships and that includes the relationships among the different parts (for example, the petals on a daisy).
- Learning to recognize patterns helps children to organize and make sense of their world. This further promotes children’s ability to problem solve as they engage in new materials and activities.
- Learning to organize objects into a repeated sequence is called a “seriation” and this is another kind of pattern (such as the red-white pattern on a candy cane or the stripes on the American flag).
- Children use first, second, third, and so on to name the position or location of the different members belonging to a sequence (for example, in a repeated red, white, green, and blue pattern on a beaded necklace, the green bead is third).
- Strong pattern recognition leads to later algebraic understanding.
- Rich activities and conversations provide children with important opportunities to develop and practice reasoning and problem-solving skills as they use mathematical ideas and relationships, while simultaneously expanding children’s vocabulary.