

## CORE SKILL: THINK – MATH

# Patterning



### What You Need to Know

Classification refers to sorting or grouping based on common traits or characteristics. Toddlers love to sort like-items as it is a part of how they are beginning to make sense of the world around them. For example, putting big things together or little things together. Patterns rely on classification and sorting in that children have to understand a variety of characteristics in order to create patterns. Patterns are a predictable sequence that results from applying a particular rule. Toddlers are beginning to be able to sort objects or identify patterns based on basic characteristics. Some characteristics include visual (ball vs. block), auditory (clap vs. stomp), and movement (walk vs. crawl). As they begin to learn about simple patterns, young children need to understand that there is always an element that should come “next.” They will learn that this can be figured out through the pattern, and that patterns can go on indefinitely.

### Things to Consider

Classification and patterning help children make sense of their world and attend to traits/characteristics of objects. An essential precursor of pattern identification or creation is sorting or classifying based on characteristics. For example, sorting types of shapes in order to make a repeating pattern of circles and rectangles. Keep in mind that classifying and patterning are both much more challenging when there are two overlapping rules, such as colors *and* shapes (e.g., red square, yellow triangle, red square, yellow triangle). For toddlers, the focus should be on simple classification and patterning, with only one rule at a time (e.g., red, yellow, red, yellow). Be sure to use materials that are relevant to children. For children with visual disabilities, use tactile or high-contrast materials.

### Development of Patterning

Between 9 and 18 months, children may:	Between 16 and 36 months, children may:
Begin to classify objects in a simple but thoughtful manner (e.g., toys that roll vs. toys that do not roll).	Recognize simple patterns in what they see, hear, or how they move.
Use language to classify objects according to basic characteristics, such as type (e.g., toy animals, blocks).	Classify by putting like items together and naming the group/classification.

### Setting the Stage

Create opportunities for children to sort and classify objects, calling attention to classification as it happens spontaneously:

- ◆ **Routines, Transitions, and Meals:** throughout the day, call attention to sorting opportunities. For example, narrate the sorting that happens during clean up, and classify types of food during meals and snacks.
- ◆ **Play and Outdoor Time:** during choice time (inside or outside), encourage children to classify objects, such as types of play equipment on the playground (e.g., slide vs. swings) or types of materials in the book corner (e.g., books vs. pillows). Outside, encourage older toddlers to sort nature items by type (e.g., sticks, rocks, and leaves).

Create and attend to patterns during play, meals, and routines.

- ◆ **Routines, Transitions, and Meals:** during a transition, encourage children to create patterns with their bodies, such as ‘jump, clap, jump, clap’ as they make their way to a meal. Or, create patterns as you greet children in the morning/say goodbye at the end of the day (e.g., hug, high five, hug, high five).
- ◆ **Play and Outdoor Time:** support children to create simple patterns out of blocks, counters, nature objects, and any number of other materials.



# Intentional Teaching Practices to Support Patterning

OBSERVE	<p><b>Observe</b></p> <p>Observe children as they play to determine if some are beginning to naturally sort/classify toys or objects in the classroom based on characteristics or uses (e.g., sorting dishes vs. pretend food in the kitchen during pretend play). Related to patterning, observe whether children are able to follow clapping or stomping patterns during music and movement. As you observe children throughout the day, take note of opportunities in which you will be able to call attention to classification or patterning as you interact with them and engage in play.</p>
FOCUS	<p><b>Label Patterns and Object Characteristics</b></p> <p>Call attention to the characteristics of objects in order to support children’s classification efforts. In addition, call attention to patterns around the classroom and school.</p> <ul style="list-style-type: none"> <li>◆ “Let’s put all of the balls away together in this bin and put all of the dolls away in this basket.”</li> <li>◆ “I see that you have stripes on your shirt today – red, blue, red, blue, red, blue.”</li> <li>◆ “I’ll put the blocks in the bucket, then you’ll dump them out. I’ll put them back in, and you’ll dump them back out!”</li> <li>◆ “(Child) is lining up toys. Can I line my toys up next to yours? I’ll put a big toy, then a small toy, then a big toy, and a small toy...”</li> </ul>
SCAFFOLD I	<p><b>Prompt Children to Identify, Repeat, or Extend Patterns</b></p> <p>Create simple patterns, encouraging children to attend to the sequence.</p> <ul style="list-style-type: none"> <li>◆ “I’m making a line with our toys. I am repeating the kinds of toys I line up like this – toy animal, block, toy animal, block. Do you see the pattern? Point to what I should put in the line next.”</li> </ul>
SCAFFOLD II	<p><b>Prompt Children to Sort (or Compare) Objects by Characteristics</b></p> <p>Support children as they classify by sorting and comparing.</p> <ul style="list-style-type: none"> <li>◆ “I need your help putting the toys away in the right place! Let’s put all of the cars together in a pile. Can you add cars to this pile with me? Now let’s put books in this pile over here.”</li> </ul> <p>Children who have difficulty with cognitive flexibility may also find classification/sorting challenging. Support children who may be rigid in their classification of objects by sorting the <i>same</i> objects in <i>different</i> ways. For example, you can sort a stuffed teddy bear and a stuffed elephant into the ‘stuffed animals’ group, or separately into the ‘forest animals’ group and ‘zoo animals’ group.</p>
KEEP IT GOING	<p>Consider what you learned from observing children on Monday as well as their reaction to your Focus and Scaffolds. Find ways to build the activities from Setting the Stage into your regular routines.</p>