

The Young Children’s Program provides an environment designed to help each child

- **Construct knowledge through experience and inquiry (GOAL 7)**

Adapted from COGNITION AND GENERAL KNOWLEDGE—MATHEMATICAL CONCEPTS, Milestones of Child Development, VA Early Childhood Development Alignment Project, 2007

Number and Operations

	36-48 mo	Begin to count by rote	
	36-48 mo	Begin to associate number concepts, vocabulary, quantities, and written numerals in meaningful ways	
	36-48 mo	Demonstrate advancing knowledge of numbers and counting <i>(child uses numbers & counting in daily activities, tells what number comes next in a sequence)</i>	
	48 mo+	Begin to make use of one-to-one correspondence in counting objects and matching groups of objects	
	48 mo+	Increase in ability to compare numbers of objects using appropriate vocabulary	
	48 mo+	Develop increasing ability to count in sequence and to use one-to-one correspondence	
	48 mo+	Show increased curiosity and interest in numbers and counting as a means for solving problems and determining quantity	

Measurement

	36-48 mo	Explore measuring tools (e.g., measuring cup, ruler, scale)	
	36-48 mo	Describe physical objects in terms of relative size (e.g., big, little, small, tall, short, long, heavy, light)	
	36-48 mo	Demonstrate understanding of concepts related to quantity (e.g., many, a lot, full, empty, whole, part, all, none)	
	48 mo+	Use non-standard units of measurement to explore the environment	
	48 mo+	Use standard tools to explore and understand the environment	
	48 mo+	Compare objects based on differences in length, weight, and temperature using appropriate vocabulary	
Not being assessed	48 mo+	Show progress in using standard and non-standard measures for length, capacity, weight, time, and temperature	

Patterns and Relationships

	36-48 mo	Recognize, sort, and classify objects by a single characteristic (e.g., color, size, shape, and texture)	
	36-48 mo	Continue to understand the relationship between objects <i>(child describes group of objects on basis of common attribute, can note differences between objects)</i>	
	48 mo+	Recognize and copy simple patterns (e.g., sounds, objects, shapes)	
	48 mo+	Use patterns to predict relationships between objects	
	48 mo+	Create original patterns using a variety of materials according to one or more attributes (e.g., color, size, shape)	

Shapes

	36-48 mo	Recognize simple shapes (e.g., circle, triangle, rectangle, and square) ○△□□	
	36-48 mo	Use mathematical language to describe shapes and their relative parts and attributes <i>(child recognizes shapes in the environment and describes attributes)</i>	
	36-48 mo	Recognize, name, and sort simple shapes <i>(child recognizes and sorts like shapes)</i> ○△□□	
	48 mo+	Recognize three-dimensional shapes (e.g., cylinders, spheres, cones) through everyday experiences	
	48 mo+	Create, build, or draw shapes using a variety of materials	

Spatial Sense			
	36-48 mo	Show understanding of different relationships of objects in space	
	36-48 mo	Show understanding of several positional words	
	48 mo+	Show increasing understanding of directionality, order, and position of objects and words such as next to, beside, above, below, under, over, top, and bottom	
Data Collection and Analysis			
	36-48 mo	Apply knowledge or experience to a new context	
	36-48 mo	Demonstrate understanding that physical objects and experiences are quantifiable	
	48 mo+	Collect and organize data about themselves, their environment, and their experiences	
	48 mo+	Organize and display their information by shared attribute or relationship	
	48 mo+	Analyze collected data and generate logical conclusions	
Time and Sequence			
	36-48 mo	Use words to describe time (e.g., hour, day, week, month, morning, afternoon, night)	
	36-48 mo	Demonstrate improved understanding of past, present, and future using words such as before, after, now, and then	
	48 mo+	Demonstrate beginning understanding of sequence	
	48 mo+	Identify the positions of objects or persons in sequence (e.g., first, second, third, last, before, after)	