

**DOMAIN 4: GENERAL KNOWLEDGE****SUB-DOMAIN: MATHEMATICS AND NUMERACY****PROPERTIES OF ORDERING**

**GOAL 41: CHILDREN DEMONSTRATE UNDERSTANDING OF PATTERNS, RELATIONS, AND FUNCTIONS USED TO ORGANIZE THEIR WORLD AND FACILITATE PROBLEM SOLVING.**

Age Range	Developmental Growth	Child Indicators	Caregiver Strategies
<p><b>60 Months through Kindergarten</b></p>	<p>Sorts, classifies, and orders objects by a variety of attributes and paired common relations.</p>	<ul style="list-style-type: none"> <li>▪ Recognizes, names, compares, sorts, and creates two- and three-dimensional shapes (sphere, cube, and cone).</li> <li>▪ Combines shapes to create two-dimensional figures.</li> <li>▪ Investigates and predicts the results of putting together and taking apart two- and three-dimensional shapes.</li> <li>▪ Describes characteristics of familiar geometric and non-geometric shapes in the environment, with assistance.</li> <li>▪ Recognizes and creates shapes that have symmetry.</li> <li>▪ Recognizes, describes, and extends patterns; and translates from one representation to another.</li> <li>▪ Uses rules/generalizations to replicate patterns.</li> <li>▪ Creates own patterns applying determined rules or generalizations.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provide construction materials of varying sizes and shapes for multiple purposes (color strips of paper used to create weaving patterns).</li> <li>▪ Play games with visual patterns like cards, dominoes, and dice for child to recognize pattern arrangements representing specific quantities.</li> <li>▪ Help the children carry out and make graphs of surveys for likes/ dislikes (e.g. survey child's favorite item from the lunch menu).</li> <li>▪ Record daily lunch count or weather forecasts and complete data analysis to reveal patterns.</li> <li>▪ Help child draft/illustrate picture recipes for other children to use.</li> <li>▪ Play classification games that encourage child to describe, compare/contrast, match, and identify objects simultaneously.</li> <li>▪ Ask child to use ordinal numbers (first, second, third) to describe or retell stories and events.</li> <li>▪ Challenge child to make predictions concerning functional patterns in daily routines and activities (e.g. "What might happen if we don't count how many want milk for lunch?").</li> <li>▪ Provide opportunities for child to observe functional patterns when adding/subtracting.</li> </ul>