KUM PRESCHOOL

Math Expectations for the Early Childhood Classroom

Number and Operations

Uses number to show quantity

Process Standards	Examples
Shows interest in counting and quantity.	*Repeats counting rhymes and singing games with numbers.*
Able to rote count in sequence.	*Counts from one to ten or higher.*
Counts objects with understanding.	*Counts five items accurately.*

Uses language to represent a number of objects

Process Standards	Examples
Uses language to compare number.	*Uses terms such as; more/less, greater/fewer, equal to.*
Combines objects and names how many.	*Recognizes that three cars and two trucks equal five vehicles.*
Separates objects and names how many.	*Plays with a plastic ball and bowling pins and can tell how many fell down and how many are left standing.*
Explores everyday fractions.	*Says,"I have a whole orange," or "I have half an apple."*

Solves problems using number

Process Standards	Examples
Names how many there are in a group (up to 5 objects) without counting.	*Rolls a number die and tells how many dots are on it without counting.*
Uses one-to-one correspondence when counting objects.	*Puts a cup with each napkin when setting the table.*
Uses one-to-one correspondence to compare the size of a group of objects.	*Matches number of cars to a friend's and says, "I have more."*
Estimates, then counts to verify the number of objects.	*Guesses how many pennies are on the table, then counts the pennies.*

Uses numerical representation

Process Standards	Examples
Uses drawings to represent number.	Draws pictures showing size and quantity of family members.
Identifies numerals in everyday situations.	Selects numerals on the telephone, calculator, or computer.
Uses ordinal numbers.	Can identify in a line of children who is first, second, last, etc.
Writes numerals.	Tries to write how old he or she i.s
Matches numeral with quantity.	Can correctly count the spaces on a game board that match the numeral on a die or spinner.

Patterns and Relationships (Algebra)

Recognizes relationships in the environment

Process Standards	Examples
Matches, sorts and regroups objects according to one or more characteristics.	*Sorts plastic foods by size, color, shape or category.*
Orders things according to relative differences.	*Talks about who is tall, taller, tallest.*

Uses patterns in the environment

Process Standards	Examples
Recognizes patterns	*Talks about color or pattern in clothing.* *Identifies color patterns that repeat.*
Duplicates and extends patterns.	*Repeats a pattern according to size, color, shape, etc. while stringing beads.*
Independently creates patterns.	*Creates simple patterns with beads or blocks according to color, size or shape.*

Geometry and Spatial Sense

Investigates positions and locations

Process Standards	Examples
Takes objects apart and puts them together.	*Builds with interlocking blocks* *Completes simple puzzles*
Uses actions and words to indicate position and locations.	*Talks about objects that are on/off/under/in front of/ behind/inside/outside/next to, etc.*
Uses actions and words to indicate movement and orientation	*Draws paths or beginnings of a map to show location during play.*

Explores shapes in the environment

Process Standards	Examples
Investigates and talks about the characteristics of shapes.	*Says, "A circle is round."* *Says that squares and triangles have corners and straight sides.*
Creates and duplicates three-dimensional and two-dimensional shapes using a variety of materials.	*Makes shapes with Play-Doh, pipe cleaners, string or yarn, and paper and pencil.*
Identifies and names some shapes.	*Says, "The flag is the shapes of a rectangle."*
Indicates if shapes are alike or different using one or more characteristics.	*Says, "A bubble and an orange are both like balls (spheres)."*

Measurement

Makes comparisons

Process Standards	Examples
Compares objects using measurable features.	*Uses words to describe opposites (e.g., big/little, long/short, heavy/light).*
Describes measurement.	*Uses a variety of language to describe measurement (e.g., shorter, taller, wider, bigger, heavier, holds more, hotter, etc.)*
Orders three or more objects according to length or size differences.	*Puts toy cars in a row from smallest to largest.*
Uses language associated with time in everyday situations.	*Says, "My birthday comes in the summer."*
Anticipates, remembers and predicts a sequence of events.	*Says, "We went to the library and then the grocery store."*

Uses measurement

Process Standards	Examples
Explores ways to measure.	*Fills a container with solids or liquid. Sees how many blocks it takes to cover a sheet of paper.*
Measures using objects.	*Places a string next to an object to measure length.*

Exploring Data

Collects, organizes and uses information	
Process Standards	**Examples**
Asks questions to gather information.	*Says, "Raise your hand if your favorite color is blue."*
Represents information in a variety of ways	*Creates graphs, tally sheets, checklists, and surveys.*
Sorts and classifies objects or information into groups and explains how the grouping was done.	*Puts objects together that have the same use (e.g., blocks, dishes, vehicles, clothes).*
Evaluates information to answer questions.	*Says, "Two kids have a birthday in July."* *Says, "More buttons are red."*