

Pre-Kindergarten Mathematics Curriculum Outcomes Framework

Mathematical learning in the preschool years relies on opportunities to describe and explore relationships of objects and materials. Mathematics is embedded in active, hands-on play with real objects. Children use their senses to build concept knowledge.

Adapted from PA Learning Standards for Early Childhood

Numbers, Numerical Representation, Number Operations

- Uses numbers to determine quantity
- Demonstrates one to one correspondence
- Identifies written numerals
- Compares numbers and quantities
- Combines and separates groups
- Uses ordinal numbers to describe position
- Uses mathematical vocabulary (less than, fewer, equal)
- Identifies penny, nickel, dime
- Counts by rote to 20
- Begins to solve number problems

Patterns, Relations and Functions

- Compares and classifies
- Sorts, classifies, categorizes by one or more attributes
- Orders objects by properties
- Recognizes, describes, reproduces and extends patterns

Space and Shape

- Recognize, name, describe, draw 2 & 3 dimensional shapes
- Put together and take apart increasingly difficult shapes
- Matches shape formations and sizes
- Recognizes geometric shapes in environment
- Uses and understands directionality, order and positional words
- Shows awareness of symmetry

Measurement

- Demonstrates awareness of measurement attributes (length, volume, weight, area, time, temp)
- Develops awareness of seriation comparisons (length, size, weight)
- Relates sequence of events
- Recognizes instruments for measuring time, temp, length, weight...
- Uses standard and non-standard measures

Data

- Contribute, organize, and display data on graphs using objects and pictures
- Read and interpret data displays using words to compare
- Make predictions

Problem Solving

- Make predictions based on observation and information
- Solve problems by guessing and checking and through trial and error
- Tell others how to solve a problem
- Understand that there is more than one way to solve a problem