



PRE-KINDERGARTEN OVERVIEW

In Pre-Kindergarten, instructional time should focus on two critical areas:

- (1) developing an understanding of whole numbers using concrete materials, including concepts of correspondence, counting, cardinality, and comparison;
- (2) describing shapes in their environment.

Numbers and Operations

Counting and Cardinality

- Know number names and the count sequence.
- Count to tell the number of objects.
- Compare numbers

Number and Operations in Base Ten

- Work with numbers 1 - 10 to gain foundations for place value.

Operations and Algebraic Thinking

- Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
- Understand simple patterns

Measurement and Data Analysis

- Describe and compare measurable attributes.
- Classify objects and count the number of objects in categories.

Geometry

- Identify and describe shapes.
- Analyze, compare, and create shapes

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

CRITICAL AREAS:

More learning time in Pre-Kindergarten should be devoted to number than to other topics.

(1) **Students develop an understanding of the meanings of whole numbers and recognize the number of objects in small groups by counting** – the first and most basic mathematical algorithm. They understand that number words refer to quantity. They use one-to-one correspondence to solve problems by matching sets and comparing number amounts and in counting objects to 10. They understand that the last word that they state in counting tells “how many” and they count to determine number amounts and compare quantities (using language such as “more than” and “less than”).

(2) **Students describe their physical world using geometric ideas (e.g., shape and special relations) and vocabulary.** They identify and name basic two-dimensional shapes, such as triangles, rectangles, squares, and circles. They use basic shapes and spatial reasoning to model objects in their environment.