

Mathematics: Kindergarten

<p>Content Standard #4 Students will have demonstrated proficiency in mathematics by solving problems requiring number sense, accurate computation, accurate measurement, collection of data and statistics, algebraic methods and geometry.</p>
<p>#4A Number sense, properties, and operations</p>
<p>#4B Patterns, functions, and algebraic structures</p>
<p>#4C Data analysis, statistics, and probability</p>
<p>#4D Shape, dimension, and geometric relationships</p>

Description

The kindergarten math program is designed to teach students the beginning concepts in number sense, geometry, recognizing and extending patterns, creating and reading graphs, and measuring items with nonstandard units. These concepts are taught with hands on materials.

Time Allocation
50 minutes daily

Texts/References
Math in Focus, Houghton Mifflin Great Source, 2009
 Picture books with math concepts

Assessments
 Questions selected from the curriculum chapter tests
 Use of manipulatives to show mastery of concepts
 Teacher observation

Grades
 Grades are based on:
 Percentage of selected questions answered correctly on chapter tests
 Percentage correct on papers where manipulatives are used to show mastery of concepts

Essential Concepts: Mathematics Kindergarten

<p>Standard #4A Number sense, properties, and operations</p>	<p>Standard #4B Patterns, functions, and algebraic structures</p>	<p>Standard #4C Data analysis, statistics, and probability</p>	<p>Standard #4D Shape, dimension, and geometric relationships</p>
<ul style="list-style-type: none"> • Whole numbers can be used to name, count, represent, and order quantity • Adding and subtracting to 10 involves composing and decomposing using a variety of strategies and representations 	<ul style="list-style-type: none"> • Patterns can repeat • Relationships exist between numbers 	<ul style="list-style-type: none"> • Visual displays of information can be used to answer questions 	<ul style="list-style-type: none"> • Shapes are described by their characteristics and position • Measurement is used to compare and order objects

Expectations: Mathematics Kindergarten

<p>Standard #4A Number sense, properties, and operations</p>	<p>Standard #4B Patterns, functions, and algebraic structures</p>	<p>Standard #4C Data analysis, statistics, and probability</p>	<p>Standard #4D Shape, dimension, and geometric relationships</p>
<ol style="list-style-type: none"> 1. Counted objects by ones to 20 and represented the quantities 2. Identified, read, and wrote corresponding numerals 3. Compared sets up to 25 objects and used language to describe concepts of more, less, or same 4. Identified small groups of objects less than 5 (including 0) without counting 5. Estimated quantities less than 20 6. Used objects and drawings to model addition and subtraction problems to 10 7. Identified number quantities one more or one less up to 10 8. Determined if more than or less than is needed to change one quantity to another 9. Determined if more than or less than is needed to change a quantity 	<ol style="list-style-type: none"> 1. Duplicated a simple pattern 2. Extended a repeating two element pattern using a variety of materials such as numbers, letters, shapes, and manipulatives 3. Generalized the counting sequence pattern from counting all to knowing concept of one more and one less 4. Communicated the relationship between composing and decomposing numbers 	<ol style="list-style-type: none"> 1. Described information in charts, picture graphs, and bar graphs 2. Collected classroom data 3. Identified and compared own data to group's data 4. Used words to describe attributes of objects 5. Sorted and grouped similar objects into simple categories. 6. Contributed to class display of information (charts, graphs) 	<ol style="list-style-type: none"> 1. Recognized and informally described two dimensional shapes with varying orientation, sizes, and shapes 2. Used relational vocabulary, such as above, below and next to, to describe spatial relationships 3. Recognized and compared attributes of length, height, weight, capacity of objects 4. Used estimates of measurements from everyday experiences 5. Ordered several objects by length, height, weight, capacity, or price (PFL)