



Curriculum Map: Math - Kindergarten

Course: Math K -

Description: Bridges in Mathematics (Math Learning Center)
Box It and Bag It (Math Learning Center)

- The Math Learning Center Philosophy: The programs facilitate the development of children's mathematical thinking and reasoning abilities by providing age-appropriate problems and investigations in the areas of number, geometry, data analysis, algebraic thinking, and measurement. Some of these problems and investigations grow out of ventures into the everyday world—playing games, reading stories learning about different types of animals, doing simple art projects—while others delve more deeply into the world mathematics itself. Children are encouraged to explore, develop, test, discuss, and apply ideas; to see mathematics as something that is fluid, vibrant, and very relevant both as a discipline and as a tool to benefit humanity.

To accomplish these goals, Kindergarten instruction focuses on:

- Numeral recognition
- Numeral writing
- Place value
- Counting
- Even/odd numbers
- Counting by tens fives
- Patterning
- Sorting
- Estimation
- Introduction to time/money

Strand: 1.0 Numbers, Number Systems and Number Relationships

Content Strand: 1.1 Count Using Whole Numbers to 100 by 5's and 10's

Content Strand: 1.2 Use Whole Numbers and Fractions to Represent Quantities

Content Strand: 1.3 Represent Equivalent Forms of the Same Number Through the Use of Concrete Objects, Drawings, Word Names and Symbols

Content Strand: 1.4 Use Drawings, Diagrams or Models to Show the Concept of Fractions as Part of a Whole

Content Strand: 1.5 Count, Compare and Make Change Using a Collection of Coins and One Dollar Bills

Content Strand: 1.6 Apply Number Patterns (Odd and Even) and Compare Values of Numbers on the Hundred Board

Content Strand: 1.7 Use Concrete Objects to Count, Order and Group

Content Strand: 1.8 Demonstrate Understanding of One-to-One Correspondence

Content Strand: 1.9 Apply Place Value Concepts and Numeration to Counting, Ordering, and Grouping

Content Strand: 1.10 Estimate, Approximate, Round or Use Exact Numbers as Appropriate

Content Strand: 1.11 Describe the Inverse Relationship Between Addition and Subtraction

Content Strand: 1.12 Demonstrate Knowledge of Basic Facts for Basic Operations

Strand: 2.0 Computation and Estimation

Content Strand: 2.1 Use Concrete Objects to Represent Joining and Separating up to 10 Objects in Everyday Situations

Content Strand: 2.2 Use Concrete Objects to Show Joining of Groups and Separating a Group in Quantities Up to and Including 10

Content Strand: 2.3 Determine the Sum of the Same Two One-Digit Numbers Using Concrete Objects

Content Strand: 2.4 Describe Separating Concrete Objects Into Equal Groups

Content Strand: 2.5 Make Estimates of Objects in a Set Up to and Including 20, Explain, Revise, and Verify

Content Strand: 2.6 Explain and Describe the Process of Adding and Subtracting

Strand: 3.0 Measurement and Estimation

Content Strand: 3.1 Compare Two Objects, Using Direct Comparison of Nonstandard Units of Measurement

Content Strand: 3.2 Determine the Length and Height of Objects With Nonstandard Units (e.g., Hands, Shoe Lengths, Jelly Beans)

Content Strand: 3.3 Name and Order the Four Seasons and Days of the Week

Content Strand: 3.4 Tell Time to the Nearest Hour Using Analog and Digital Clocks

Content Strand: 3.5 Identify Different Units of Measurement

Content Strand: 3.6 Understand the Spatial Concepts of Over, Under, Beside, In, Next To, Out, Around, On, and Between

Content Strand: 3.6 Using Concrete Objects, to Represent Nonstandard Units, Estimate the Measurements Up to 10 Units

Content Strand: 3.7 Identify and Describe Different Attributes of Objects (e.g., Color, Shape, Size)

Strand: 4.0 Mathematical Reasoning and Connections

Content Strand: 4.1 Make Predictions Regarding Quantity, Size, and Shape of Objects

Content Strand: 4.2 Identify the Use of Measurement in Everyday Situations

Strand: 5.0 Mathematical Problem Solving and Communication

Content Strand: 5.1 Use Appropriate Problem Solving Strategies (e.g., Guess/check, Working Backwards)

Content Strand: 5.2 Determine When Sufficient Information is Present to Solve a Problem and Explain How to Solve a Problem

Content Strand: 5.3 Select and Use an Appropriate Method, Materials, and Strategies to Solve Problems, Including Mental Mathematics, Paper and Pencil and Concrete Objects

Strand: 6.0 Statistics and Data Analysis

Content Strand: 6.1 Gather, Organize, and Display Data Using Pictures, Tallies, Charts, Bar Graphs, and Pictographs

Content Strand: 6.2 Formulate and Answer Questions Based on Data Shown on Graphs

Content Strand: 6.3 Predict the Likely Number of Times a Condition Will Occur Based on the Analyzed Data

Content Strand: 6.4 Form and Justify an Opinion on Whether a Given Statement is Reasonable Based on a Comparison to Data

Strand: 7.0 Probability and Predictions

Content Strand: 7.1 Predict and Measure the Likelihood of Events and Recognize That the Results of an Experiment May Not Match Predicted Outcomes

Content Strand: 7.2 Design and Fair and Unfair Spinner

Content Strand: 7.3 List or Graph the Possible Results of an Experiment

Content Strand: 7.4 Analyze Data Using the Concepts of Largest, Smallest, Most Often, Least Often, and Middle

Strand: 8.0 Algebra and Functions

Content Strand: 8.1 Recognize, Describe, Extend, Create, and Replicate a Variety of Patterns Including Attribute, Activity, Number, and Geometric Patterns

Content Strand: 8.2 Use Concrete Objects and Trial and Error to Solve Number Sentences and Check if Solutions are Sensible and Accurate

Content Strand: 8.3 Substitute a Missing Addend in a Number Sentence

Content Strand: 8.4 Create a Story to Match a Given Combination of Symbols and Numbers

Content Strand: 8.5 Use Concrete Objects and Symbols to Model the Concepts of Variables, Expressions, Equations, and Inequalities

Content Strand: 8.6 Explain the Meaning of Solutions and Symbols

Content Strand: 8.7 Use a Table or Chart to Display Information

Content Strand: 8.8 Describe and Interpret the Data Shown in Tables and Charts

Content Strand: 8.9 Demonstrate Simple Function Rules

Content Strand: 8.10 Analyze Simple Functions and Relationships and Locate Points on a Simple Grid

Strand: 9.0 Geometry

Content Strand: 9.1 Name and Label Geometric Shapes in Two and Three Dimensions (e.g., Circle/Sphere, Square/Cube, Triangle/Pyramid, Rectangle/Prism)

Content Strand: 9.2 Build Geometric Shapes Using Concrete Objects (e.g., Manipulatives)

Content Strand: 9.3 Draw Two and Three-Dimensional Geometric Shapes and Construct Rectangles, Squares, and Triangles on the Geo-Board and on Graph Paper Satisfying Specific Criteria

Content Strand: 9.4 Find and Describe Geometric Figures in Real Life

Content Strand: 9.5 Identify and Draw Lines of Symmetry in Geometric Figures

Content Strand: 9.6 Identify Symmetry in Nature

Content Strand: 9.7 Fold Paper to Demonstrate the Reflections About a Line

Content Strand: 9.8 Shown Relationships Between and Among Figures Using Reflections

Content Strand: 9.9 Predict How Shapes Can be Changed by Combining or Dividing Them

Strand: 10.0 Trigonometry

Content Strand: 10.1 Identify Right Angles in the Environment

Content Strand: 10.2 Model Right Angles and Right Triangles Using Concrete Objects

Strand: 11.0 Calculus

Content Strand: 11.1 Identify Whole Number Quantities and Measurements From Least to Most and Greatest Value

Content Strand: 11.2 Identify Least and Greatest Values Represented in Bar Graphs and Pictographs

Content Strand: 11.3 Categorize Rates of Change as Faster and Slower

Content Strand: 11.4 Continue a Pattern of Number or Objects That Could be Extended Infinitely