

MOSCOW SCHOOL DISTRICT
CURRICULUM GUIDE
Subject/Course: Math
Kindergarten

Mathematical reasoning and problem solving processes should be incorporated throughout all mathematics standards. Students should use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models to communicate mathematical information and to explain mathematical reasoning and concepts.

Standard 1: Number and Operation

Students in Kindergarten demonstrate knowledge of our numeration system by counting forward by ones to at least 31. Students show the verbal, symbolic, and physical representations of a number up to 10.

<i>Goal – The student will:</i>	<i>Objectives (to be reached by the end of Kindergarten)</i>	<i>Samples of Applications</i>	<i>Curriculum Materials (including technological resources)</i>	<i>Key Vocabulary for Standard 1</i>
Goal 1.1: Understand and use numbers.	<ul style="list-style-type: none"> • K.M.1.1.1 Demonstrate knowledge of our numeration system by counting forward by ones to at least 31. (257.01.a) • K.M.1.1.2: Show the verbal, symbolic, and physical representations of a number up to 10. (257.01.b) • K.M.1.1.3 Identify a penny as a value of money. (257.01.c) • K.M.1.1.4 Select strategies appropriate for solving a problem. (258.01.a) • K.M.1.1.5 Use appropriate vocabulary. 	<ul style="list-style-type: none"> • Calendar • Rote counting • Using manipulatives 1-1 correctly • Put number cards in order from 0 to 10 • Match the value of a number with it corresponding number • Count a set of objects using one-to-one correspondence • Use pennies to purchase items from a school store • Counting up, counting down. Use: 1) guess and check; 2) acting out 	<ul style="list-style-type: none"> • Harcourt Math • Manipulatives • Use stories to enact story problems • Computer software 	
Goal 1.2: Perform computations accurately.	<ul style="list-style-type: none"> • K.M.1.2.1 Use concrete objects to illustrate the concepts of addition and subtraction. (257.02.a) • K.M.1.2.2 Use appropriate vocabulary. (257.02.b) 	<ul style="list-style-type: none"> • Story problems with manipulatives • Given a picture or story, use counters to make up your own number story and solution. 		
Goal 1.3: Estimate and judge reasonableness of results	<ul style="list-style-type: none"> • K.M.1.3.1 Use estimation to identify a number of objects. (257.03.a) • K.M.1.3.2 Use estimation to evaluate the reasonableness of an answer. (257.03.b) • K.M.1.3.3 Use appropriate vocabulary. (257.03.c) 	<ul style="list-style-type: none"> • Estimate and check up to 30. 		

Standard 2: Concepts and Principles of Measurement

Students in Kindergarten use appropriate vocabulary.

<i>Goal – The student will:</i>	<i>Objectives (to be reached by the end of Kindergarten)</i>	<i>Samples of Applications</i>	<i>Curriculum Materials (including technological resources)</i>	<i>Key Vocabulary for Standard 2</i>
Goal 2.1: Understand and use U.S. customary and metric measurements.	<ul style="list-style-type: none"> • K.M.2.1.1 Compare the lengths or sizes of objects (e.g., longer, shorter, larger, smaller). • K.M.2.1.2 Estimate measurement using concrete objects. (259.01.b) • K.M.2.1.3 Name the day of the week and the day’s date using a calendar. • K.M.2.1.4 Use appropriate vocabulary. (259.01.c) 	<ul style="list-style-type: none"> • Measure with link chains. • Use non-standard units (e.g. paper clips, hands, shoes, uni-fix cubes) to measure items in class for length, volume, and weight. • Use thermometers to measure relative temperature. • Daily calendar: “Today is Tuesday, January ____. 	<ul style="list-style-type: none"> • Harcourt Math 	
Goal 2.2: Apply the concepts of rates, ratios, and proportions. - No objectives at this grade level.				
Goal 2.3: Apply dimensional analysis. - No objectives at this grade level.				

Standard 3: Concepts and Language of Algebra and Functions

Students in Kindergarten compare sets of objects using the vocabulary words/phrases of less than, greater than, and same as. Students replicate and extend simple repeating patterns.

<i>Goal – The student will:</i>	<i>Objectives (to be reached by the end of Kindergarten)</i>	<i>Samples of Applications</i>	<i>Curriculum Materials (including technological resources)</i>	<i>Key Vocabulary for Standard 3</i>
Goal 3.1: Use algebraic symbolism as a tool to represent mathematical relationships.	<ul style="list-style-type: none"> • K.M.3.1.1 Use concrete objects to identify and show a solution to problems. (258.02.a) • K.M.3.1.2 Compare sets of objects using vocabulary (less than, greater than, and same as). (260.01.a) 	<ul style="list-style-type: none"> • There are two bears at the gym. Three more bears came. How many bears were at the gym? One bear got sick and went home. How many bears were still in the gym? Use Teddy Bear counters. • Identify which set of objects is greater, less, or the same as. 	<ul style="list-style-type: none"> • Harcourt Math • Manipulatives • Calendar supplies 	
Goal 3.2: Evaluate algebraic expressions. No objectives at this grade level.		<ul style="list-style-type: none"> • + • – • = 		
Goal 3.3: Solve algebraic equations and inequalities. - No objectives at this grade level.				
Goal 3.4: Understand the concept of functions.	<ul style="list-style-type: none"> • K.M.3.4.1 Replicate and extend simple repeating patterns (e.g., ABAB). (263.01.a) • K.M.3.4.2 Use appropriate vocabulary. (263.01.c) 	<ul style="list-style-type: none"> • Copy and extend a pattern using unifix cubes. Use the same pattern using different colors. (AB, AAB, ABC, ABB) • Calendar 		

		<ul style="list-style-type: none"> Leaves and apple patterns. Pattern necklaces, Teddy bears, linking cubes, etc. 		
Goal 3.5: Represent equations, inequalities and functions in a variety of formats. - No objectives at this grade level.				
Goal 3.6: Apply functions to a variety of problems. - No objectives at this grade level.				

Standard 4: Concepts and Principles of Geometry

Students in Kindergarten recognize, name, compare, and sort the two- and three- dimensional shapes of triangles, squares, circles, cones, and cubes. Students apply appropriate vocabulary for position and size.

<i>Goal – The student will:</i>	<i>Objectives (to be reached by the end of Kindergarten)</i>	<i>Samples of Applications</i>	<i>Curriculum Materials (including technological resources)</i>	<i>Key Vocabulary for Standard 4</i>
Goal 4.1: Apply concepts of size, shape, and spatial relationships.	<ul style="list-style-type: none"> K.M.4.1.1 Recognize, name, compare, and sort two- and three- dimensional shapes (triangle, rectangle, square, circle, cone, cube). (261.01.a) K.M.4.1.2 Sort and classify objects. K.M.4.1.3 Apply appropriate vocabulary. (261.01.d) 	<ul style="list-style-type: none"> Pattern blocks Tanagrams Attribute blocks Sort by shape, color, size, other attributes, using attribute blocks. 	<ul style="list-style-type: none"> Harcourt Math Manipulatives 	
Goal 4.2: Apply the geometry of right triangles. - No objectives at this grade level.				
Goal 4.3: Apply graphing in two dimensions.	<ul style="list-style-type: none"> K.M.4.3.1 Describe the location of an object relative to another (e.g., next to, under, over, behind). 	<ul style="list-style-type: none"> Above, below, up, down, over, under, inside, outside, top, bottom, between, middle, before, after. Getting in line. Manipulatives. Days of the week on calendar. 		

Standard 5: Data Analysis, Probability, and Statistics

Students in Kindergarten interpret information from real object graphs and simple pictographs.

<i>Goal – The student will:</i>	<i>Objectives (to be reached by the end of Kindergarten)</i>	<i>Samples of Applications</i>	<i>Curriculum Materials (including technological resources)</i>	<i>Key Vocabulary for Standard 5</i>
Goal 5.1: Understand data analysis.	<ul style="list-style-type: none"> K.M.5.1.1 Interpret information from real object graphs and simple pictographs. (262.01.a) K.M.5.1.2 Use appropriate vocabulary. (262.01.b) 	<ul style="list-style-type: none"> Provide a simple graph such as how many girls and how many boys and determine most, least, and same. Weather graph. Name graph. 	<ul style="list-style-type: none"> Harcourt Math 	

Goal 5.2: Collect, organize, and display data.	<ul style="list-style-type: none"> • K.M.5.2.1 Create a graph using real objects or pictorial representations. (262.02.a) 	<ul style="list-style-type: none"> • Use children’s shoes to build a graph to tell how the shoes fasten. Put the question, “How do we fasten our shoes?” at the top of the graph. • Use a pictograph to show how students get to school. (Ride or walk.) 		
Goal 5.3: Apply simple statistical measurements. - No objectives at this grade level.				
Goal 5.4: Understand basic concepts of probability.	<ul style="list-style-type: none"> • Predict and perform results of simple probability experiments. 	<ul style="list-style-type: none"> • Place three objects, two of one color and one of another color, in a bag. Predict what color will be drawn from the bag. 		
Goal 5.5: Make predictions or decisions based on data.	<ul style="list-style-type: none"> • Make decisions based on probable results. 	<ul style="list-style-type: none"> • If it has been snowing for three days, should a person wear a bathing suit outside? 		