

Course Guide to Essential Outcomes

Kindergarten Mathematics

Course Description: Kindergarten Mathematics utilizes Common Core State Standards for Mathematics, employs *Ready Classroom Math* as a resource, and infuses identified effective math practices to meet student needs.

Adopted Course Primary Resource	Supplementary Resources
<ul style="list-style-type: none"> <i>Ready Classroom Math</i> (Curriculum Associates) 	<ul style="list-style-type: none"> i-Ready Online Instruction - Math (Curriculum Associates) Building Fact Fluency Toolkit (Stenhouse)

Red indicates a course essential standard.

Domain	Cluster	Code	Common Core State Standard
Counting and Cardinality	Know number names and the count sequence.	K.CC.1	Count to 100 by ones and by tens.
		K.CC.2	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
		K.CC.3	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).
	Count to tell the number of objects.	K.CC.4	Understand the relationship between numbers and quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. c. Understand that each successive number name refers to a quantity that is one larger.
		K.CC.5	Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle; or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.
	Compare numbers.	K.CC.6	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. (Include groups with up to ten objects.)
		K.CC.7	Compare two numbers between 1 and 10 presented as written numerals.
Operations and Algebraic Thinking	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	K.OA.1	Represent addition and subtraction with objects, fingers, mental images, drawings (drawings need not show details, but should show the mathematics in the problem), sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
		K.OA.2	Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
		K.OA.3	Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).
		K.OA.4	For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
		K.OA.5	Fluently add and subtract within 5.
Number and Operations in Base Ten	Work with numbers 11-19 to gain foundations for place value.	K.NBT.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.
Measurement and Data	Describe and compare measurable attributes.	K.MD.1	Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
		K.MD.2	Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.
	Classify objects and count the number of objects in each	K.MD.3	Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Limit category counts to be less than or equal to 10.)

	category.		
Geometry	Identify and describe shapes	K.G.1	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.
		K.G.2	Correctly name shapes regardless of their orientations or overall size.
		K.G.3	Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").
	Analyze, compare, create, and compose shapes.	K.G.4	Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).
		K.G.5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
		K.G.6	Compose simple shapes to form larger shapes. For example, "can you join these two triangles with full sides touching to make a rectangle?"
Mathematical Practices		<ul style="list-style-type: none">• (MP1) Make sense of problems and persevere in solving them.• (MP2) Reason abstractly and quantitatively.• (MP3)Construct viable arguments and critique the reasoning of others.• (MP4)Model with Mathematics• (MP5)Use appropriate tools strategically.• (MP6)Attend to precision.• (MP7)Look for and make use of structure.• (MP8)Look for and express regularity in repeated reasoning.	

Units of Study	Essential Standards	Essential Vocabulary	Unit I Can Statements	Common Assessments & Pacing
Unit 1 Numbers 0-5: Counting, Writing, and Comparing	K.CC.A.3 K.CC.B.4a K.CC.B.4b	Numbers 0-5	<ul style="list-style-type: none"> Count with one-to-one correspondence. Identify groups of up to 5 objects. Recognize and read numbers 0-5. Write numbers 0-5. Understand 0 as representing no objects. Compare two numbers. Identify and make number pairs for 3, 4, and 5. 	-Approx. 30 days -Pre-Assessments -Formative Assessments -Summative Assessments
Unit 2 Number 6-10: Counting, Writing, Comparing, and Sorting	K.CC.A.3 K.CC.B.4a K.CC.B.4b K.CC.B.4c K.CC.B.5 K.CC.C.6 K.CC.C.7 K.MD.B.3 K.OA.A.3 K.OA.A.4	More than Less than	<ul style="list-style-type: none"> Count to 10 Recognize and write numbers to 10 Find the number that is 1 more than a given number up to 10 Compare two written numbers with and without objects Sort objects into categories Show number pairs for 10 Show number pairs for 6, 7, 8, and 9 	-Approx. 30 days -Pre-Assessments -Formative Assessments -Summative Assessments
Unit 3 Geometry: Naming, Comparing, and Building Shapes	K.G.A.2 K.G.A.e K.G.A.1 K.G.B.4 K.G.B.5 K.G.B.6	Circle Rectangle Square Triangle	<ul style="list-style-type: none"> Correctly name shapes Use position words to describe shapes and objects in the environment Compare flat shapes and solid shapes Draw shapes Build shapes from smaller shapes 	-Approx. 21 days -Pre-Assessments -Formative Assessments -Summative Assessments

Unit 4 Numbers Within 10: Addition and Subtraction	K.OA.A.1 K.OA.A.2 K.OA.A.5 K.OA.A.4 K.OA.A.3	Add Equal Minus Plus Subtract	<ul style="list-style-type: none">• Add within 5• Subtract within 5• Add within 10• Subtract within 10• Find missing parts of 10• Solve additions and subtraction word problems• Solve word problems with both addends unknown	-Approx. 50 days -Pre-Assessments -Formative Assessments -Summative Assessments
Unit 5 Numbers 11-100: Teen Numbers and Counting by 1s and 10s	K.NBT.A.1 K.CC.A.3 K.CC.B.5 K.CC.A.1 K.CC.A.2	Counting Grouping Ones Tens	<ul style="list-style-type: none">• Understand teen numbers as ten ones and some more ones• Recognize, read, and write numbers 11-20• Know how many to add to 10 to make a teen number• Count to 100 by tens• Count to 100 by ones	-Approx. 25 days -Pre-Assessments -Formative Assessments -Summative Assessments
Unit 6 Measurement: Comparing Length, Height, and Weight	K.MD.A.1 K.MD.A.2	Heavier Lighter Longer Shorter	<ul style="list-style-type: none">• Compare two objects to tell which is longer or shorter• Compare two objects to tell which is taller or shorter• Compare two objects to tell which is heavier or lighter	-Approx. 11 days -Pre-Assessments -Formative Assessments -Summative Assessments
Reteach & Enrich (Time Dependent)	Re-teach based on concepts students do not show proficiency on at end of the year. Provide enrichment activities for students showing proficiency.			
Semester II Ends				

Requirements:	Other Notes:
<ul style="list-style-type: none"> Must have 160 minimum Math lessons in a school year. 20 minutes of mental mathematics or number sense weekly (if not embedded in the week's lessons). Math talk opportunities weekly. Unit/chapter assessments are to be common among the teachers of the same course for discussion and analysis. <ul style="list-style-type: none"> Student proficiency tracked by standard (learning targets/standards). A class should achieve at least 80% proficiency on a standard referenced unit/chapter assessment in order for the teacher to move on to a new unit of learning. Reteaching is in order if this mark is not met. Each teacher will communicate to student families what will be covered in the class and how the parent can support the learning at home. 	