Kindergarten: Mathematics Curriculum

K.CC Counting and Cardinality		
☐ Know number names and the count sequence (K.CC.A	A)	
☐ Count to 100 by ones and by tens. (K.CC.A.1)		
 Count forward beginning from a given number within th 	ne known sequence (K.CC.A.2)	
□ Write numbers from 0 to 20. (K.CC.A.3)		
□ Understand the relationship between numbers and quantities; connect counting to cardinality (K.CC.B.4)		
☐ Count to answer "how many?" (K.CC.B.5)		
 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. (K.CC.C.6) 		
□ Compare two numbers between 1 and 10 presented as written numerals (K.CC.C.7)		
Essential Questions	Enduring Understandings	
Why use numbers? What do we use numbers for in real	Numbers have a variety of uses; Some real world problems	

Suggested Activities and Resources

life? How much is enough?

(in addition to guided reading and leveled materials)

Play concentration matching sets and numerals (as the year progresses, increase the numbers that students need to represent symbolically from 0-31); Transition between mathematical & real-world contexts with the same type of problem or numbers; Model the use of comparative math language during appropriate activities/ discussions; play "How Many Are There Now?" where a student counts a set of items, then another pupil rearranges the set in front of everyone & asks: How many are there now?

Suggested Assessments

Show students a numeral and have them draw/construct an appropriate set; Students use manipulatives and model the difference between counting by 1s & 2s; Play *Empty Set Hunt*: Spread cards, face down on a table. Students turn over cards and only keep the ones where zero would name how many are in the set.

can be solved using known concepts, skills, and strategies

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K.OA Operations and Algebraic Thinking Represent addition and subtraction up to 10 (K.OA.A.1) Solve addition and subtraction word problems, and add and subtract within 10. (K.OA.A.2) Decompose numbers less than or equal to 10 into pairs in more than one way. (K.OA.A.3) For any number from 1 to 9, find the number that makes 10 when added to the given number. (K.OA.A.4) Demonstrate fluency for addition and subtraction within 5. (K.OA.A.5) Essential Questions Enduring Understandings Knowing how to draw picture to solve problems is helpful in

easier? How can addition help solve problems? What happens when you put objects together?

<u>Suggested Activities and Resources</u> (in addition to guided reading and leveled materials)

Play No Counting Allowed: After viewing and counting a set of objects, guide students to "mentally" add or remove 1 item. First one to answer correctly gets a point and an extra point if he/she can explain how they did it.; Play "Number Match" – Pupil selects a number card then counts out that amount of items—or vice versa

Suggested Assessments

Perform a concrete sequence of joining or separating sets & see if students can identify the type of action performed & what resulted; Show students a two-color number train of up to 9 items and see if they can identify the part-part-whole relationships the train depicts.

checking to see that answers make sense; Most numbers

sometimes a good way to solve a problem.

can be described in terms of two parts in a variety of ways; Writing down all the possible ways of doing something is

K.NBT Number and Operations in Base Ten		
□ Compose and decompose numbers from 11 to 19 into ten ones and some further ones (K.NBT.A.1)		
Essential Questions	Enduring Understandings	
What happens when you put objects together?	Patterns can be represented in a variety of ways.	
Suggested Activities and Resources (in addition to guided reading and leveled materials)	Suggested Assessments	
For a real-life connection, include number in relation to the calendar for a given month in the day's opening activities; Use a floor number line to demonstrate the difference between counting by 1's vs. counting by 2's.	Give students a set of items & have them explain their rationale for determining if an odd or even number is being represented.	

K.MD Measurement and Data		
□ Describe measurable attributes of objects, such as length or weight. (K.MD.A.1)		
☐ Directly compare two objects with a measurable attribute in common. (K.MD.A.2)		
□ Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.		
(K.MD.A.3)		
Essential Questions	Enduring Understandings	
What things would be impossible without measurement?	There are multiple means to solving most mathematical	
Why do we need standard units of measurement? Is there	problems; Objects can be compared and ordered by size.	
such a thing as exact measurement?		
gas a aming as shaet measurement.		
Suggested Activities and Resources	Suggested Assessments	
(in addition to guided reading and leveled materials)	<u> </u>	
(in dudition to guided redding and leveled materials)	Ask students to recite the names of the days of the week in	
	, and the second	
Create a measurement learning center; Have each student trace	order; Measure the reasonableness of pupil's estimates	
and cut out a pattern of their foot, then explore the room to find		
some as long as it.		

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K.G Geometry		
 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.A.1) Correctly name shapes regardless of their orientations or overall size. (K.G.A.2) Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). (K.G.A.3) Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts and other attributes. (K.G.A.4) Model shapes in the world by building shapes from components and drawing shapes. (K.G.A.5) Compose simple shapes to form larger shapes. (K.G.A.6) 		
Essential Questions	Enduring Understandings	
What is the best shape? How would the world look if there were only (insert any shape)? If you created the world, what shapes would you use? Why?	Many everyday objects closely approximate standard geometric solids; Solid figures have many properties which make them different from each other.	
Suggested Activities and Resources	Suggested Assessments	
(in addition to guided reading and leveled materials) Play "2-D or 3-D Shape Bingo" (shapes can also be of different colors & sizes); Pass around and discuss models of each shape, name them, then ask students to find real-life examples of them.	Use direction/orientation vocabulary to direct students where to place the book; Have students pick a specific #D shape out of a collection	