Mathematics Pacing Guide Alignment with Common Core Standards

Time Frame: 8 Weeks (September – October) **Kindergarten**

Unit 1: Identifying and Comparing Numbers

Common Core	GLCE	Essential Questions	Assessments	Vocabulary	Resources
CRITICAL AREA: Representing, comparing, and ordering whole numbers and joining and separating sets **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).	**FOCAL POINT: Representing, comparing, and ordering whole numbers and joining and separating sets** **Count, Write, and Order Numbers** N.ME.00.01 Count objects in sets up to 30. N.ME.00.02 Use one-to-one correspondence to compare and order sets of objects to 30 using phrases such as "same number", "more than", or "less than"; use counting and matching. N.ME.00.03 Compare and order numbers to 30 using phrases such as "more than" or "less than." N.ME.00.04 Read and write numbers to 30 and connect them to the quantities they represent. N.ME.00.05 Count orally to 100 by ones. Count to 30 by 2's, 5's and10's using grouped objects as needed.	What are patterns? How do we create patterns?	**Before** Test student's ability to count to 100 orally by ones and tens. **During** Use manipulatives to count to 100 by tens. Observation **After** Test students' ability to write numbers from 0 to 20. Have students represent a number with a picture.	Count Forward Sort Objects Ones Tens Numbers	Kindergarten Math Website: http://prek-8.com/kindergarten/index.php Manipulatives (attribute blocks, color titles, counters, beans, etc.) Links to numbers and counting games/worksheets: www.primarygames.com/math/ishycount/index.htm www.softschools.com/counting www.kidzone.ws/math/kindergarten.htmwww.firstschoolyears.com/numeracy/counting/counting.html **Books**: One is a Snail, Ten is a Crab: A Counting by Feet Book, April and Jeff Sayre, 2006. ISBN-13: 978-0763626310 3 Little Firefighters, Stuart J. Murphy, 2003. ISBN-13: 978-0060001209 Mouse Count, Ellen Walsh, 1995. ISBN-13: 978-0152002237.

					Ten Black Dots, Donald Crews, 1995. ISBN-13: 978-0688135744. Additional Websites: www.edhelper.com www.abcteach.com www.internet4classrooms.com

Mathematics Pacing Guide Alignment with Common Core Standards

Time Frame: 6 Weeks (November – December) **Kindergarten**

Unit 2: Counting and Writing Numbers

Common Core	GLCE	Essential Questions	Assessments	Vocabulary	Resources
Count to tell the number of objects. K.CC.4 Count to tell the number of objects. 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	**Count, Write, and Order Numbers** N.ME.00.01 Count objects in sets up to 30. N.ME.00.02 Use one-to-one correspondence to compare and order sets of objects to 30 using phrases such as "same number", "more than", or "less than"; use counting and matching. N.ME.00.03 Compare and order numbers to 30 using phrases such as "more than" or "less than." N.ME.00.04 Read and write numbers to 30 and connect them to the quantities they represent. N.ME.00.05 Count orally to 100 by ones. Count to 30 by 2's, 5's and10's using grouped objects as needed.	What are numbers? How do we compare and contrast numbers?	**During** Draw lines connecting numbers to quantities Observation Test students' ability to count by giving them manipulatives and have students count them. **After** Count two groups of objects and tell which is larger/smaller	Same Different Greater than Less than Equal to Patterns Count Compare	Calendar Materials Math Software, Worksheets, and Games: www.superkids.com Online Practice and Assessments: www.internet4classrooms.com Math Games: www.funbrain.com Manipulatives/counters See books from Unit 1

scattered configuration; given a number from 1-20, count out tha many objects. **Compare numbers.** K.CC.6 Identify whether the number of objects in one group i 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.					

Mathematics Pacing Guide Alignment with Common Core Standards

Time Frame: 6 Weeks (January – Mid-February) **Kindergarten**

Unit 3: Putting Together and Pulling Apart Numbers

Common Core	GLCE	Essential Questions	Assessments	Vocabulary	Resources
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. **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 mathematic in the problem), sounds (e.g., claps), acting out situations, verbal explanations, expressions or equations.	**Compose and Decompose Numbers** N.ME.00.06 Understand the numbers 1 to 30 as having one, or two, or three groups of ten and some ones. Also count by tens with objects in ten-groups t 100. N.MR.00.07 Compose and decompose numbers from 2 to 10, e.g., 5 = 4 + 1 = 2 + 3, with attention to the additive structure of number systems, e.g., 6 is one more than 5, 7 is one more than 6. N.MR.00.08 Describe and make drawings to represent situations/stories involving putti together and taking apart for totals up to 10; use finger and object counting. **Add and subtract numbers** N.MR.00.09 Record mathematical thinking by writing simple addition and subtraction sentences, e.g., 7 + 2 = 9, 10 – 8 = 2.	How can numbers change?	**Before** Have students practice representing groups of objects that when added together equal ten. **During** Draw a picture of a number broken up by place value. Show addition and subtraction problems using manipulatives, fingers, toes, drawing, acting out, or by verba explanations. Daily word problem. **After** Use drawing to represent a word problem. Use manipulatives to decompose numbers into addition problems Using objects, students	Ones place Tens place Addition Subtraction Decompose Groups Solve Count Put together Take apart Problem Answer	Place Value organizer Straw bundles Manipulatives Base ten blocks Flashcards Addition bingo Addition worksheets: http://prek-8.com/kindergarten/kin ergartenmath_pictureadd.php Subtraction worksheets: http://prek-8.com/kindergarten/kin ergartenmath_picsub.php **Books:** One Fish, Two Fish, Read Fish, Blue Fish, Dr. Seuss, 1960. ISBN-13: 978-0394800134. Emily's First 100 Days of School, Rosemary Wells, 2005. ISBN-13: 978-0786813544. 12 Ways to Get to 11, Eve Merriam, 1996. ISBN-13:

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.	**Explore number patterns** N.MR.00.10 Create, describe, and extend simple number patterns.		will add to a given number to make ten.		978-0689808920. Each Orange Had 8 Slices, Paul Giganti, 1999. ISBN-13: 978-0688139858.
Content Moving Into Kindergarten **Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.** K.OA.5 Fluently add and subtract within 5.	**Content Moving Into Kindergarten from First Grade** **Add and Subtract Whole Numbers** N.FL.01.12 Know all the addition facts up to 10 + 10, and solve the related subtraction problems fluently.				
(Moving into 1st Grade) Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from	**(Moving out of Kindergarten into 1st grade) Add and subtract whole numbers** N.FL.01.12 Know all the addition facts up to 10 + 10, and		Minute math/Timed test Oral response	Addition Subtraction Facts	www.Coolmath.com Flashcards

K.OA.5 Fluently add and subtract within 5.	solve the related subtraction problems fluently.				

Mathematics Pacing Guide Alignment with Common Core Standards

Time Frame: 6 Weeks (Mid-February – March) **Kindergarten**

Unit 4: Shapes

Common Core	GLCE	Essential Questions	Assessments	Vocabulary	Resources
CRITICAL AREA: **Describing shapes and space** **Classify objects and count the number of objects in each category** 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.) **Identify and describe shapes (such as squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres)** K.G.1 Describe objects in the environment using names of shapes, and describe the relative positions these objects using terms such as above, below, beside, in front of, behind, and next to. K.G.3 Identify shapes as two-dimensional (lying in a plan "flat") or three-dimensional ("solid").	**FOCAL POINT:** **Describing shapes and space** **Create, explore, and describe shapes** G.GS.00.01 Relate familiar three-dimensional objects inside and outside the classroom to their geometric name, e.g., ball/sphere, box/cube, soup can/cylinder, ice cream cone/cone, refrigerator/prism. G.GS.00.02 Identify, sort, and classify objects by attribute and identify objects that do not belong in a particular group.	What are shapes? Where do we find shapes?	**Before** Sort shapes or objects Name shapes in room Oral description of shapes KWL chart **During** Orally state the positions of objects in the room. E.g. "The math poster is a rectangle. The rectangle is above the desk." Sort 2D and 3D shapes into groups Students will identify objects inside and outside the classroom by using their geometric names. Orally describe similarities and differences between shapes.	Above Behind Below Beside Category Cone Corners Cube Cylinder Equal Flat Flip In front of Next to Prism Rectangle Rotation Shape Slide Solid Sphere Square Triangle Turn	www.learningplanet.com – rats game- practice for identifying and sorting shapes Online Practice and Assessments: www.internet4classrooms.com Math Games: www.gamequarium.com Variety of 2-D shapes Variety of 3-D shapes Find shapes in everyday situations: http://www.tvokids.com/games/shapeville Geometric shapes Geo boards Pattern blocks

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.			Nature walk-identify shapes Use chart to describe similarities and shapes **After** KWL chart Use blocks to create shapes and then draw on paper.		
[Not in the Common Core State Standards]	**Moving out of Kindergarten** **Explore geometric patterns** G.GS.00.03 Create, describe, and extend simple geometric patterns.		Drawings Orally describe a pattern	Patterns Create Describe Triangle Square Circle Rectangle	Geometric shapes www.Superteacherworksheets.com
Moving into Kindergarten from 2nd grade **Analyze, compare, create, and compose 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?" **Identify and describe shapes (such as squares, circles,**	**Moving into Kindergarten from 2nd grade** **Identify and describe shapes** G.GS.02.02 Explore and predict the results of putting together and taking apart two-dimensional and three-dimensional shapes. G.TR.02.06 Recognize that shapes that have been slid, turned, or flipped are the same shape, e.g., a square rotated 45°		Observation Manipulatives	Shape Triangle Rectangle Square Flip Turn Rotation Slide	Geometric shapes Geo boards Pattern blocks

triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres) K.G.2. Correctly name shapes regardless of their orientations o overall size.	is still a square.				

Mathematics Pacing Guide Alignment with Common Core Standards

Time Frame: 6 Weeks (April – Mid-May) **Kindergarten**

Unit 5: Measurement

Common Core	GLCE	Essential Questions	Assessments	Vocabulary	Resources
CRITICAL AREA: Ordering objects by measurable attributes **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.	**Explore other measurement attributes** M.UN.00.04 Compare two or more objects by length, weight and capacity, e.g., which is shorter, longer, taller?	What is measurement? How can we measure?	**Before** Observation **During** Use balance scale to weigh objects Measure the length of objects using rulers, paperclip, or hands, etc. **After** Stand with a partner and compare who is taller/shorter.	Capacity Compare Length Longer Objects Shorter Taller Weight	Objects to measure or compare Website to compare objects: http://www.internet4classrooms.com/grade_level_help/compare_objects_math_kindergarten_k.htm **Books**: How Big is a Foot?, Rolf Myller, 1991. ISBN-13: 978-0440404958 Measuring Penny, Loreen Leedy, 2000. ISBN-13: 978-0805065725 How Tall, How Short, How Far Away, David A. Adler, 2000. ISBN-13: 978-0823416325 How Tall is That Plant?, Jim Pipe, 2003. ISBN-13: 978-0749649708 Measurement worksheets: http://prek-8.com/kindergarten/kindergartenmath_measurement.php
(Moving into 1st Grade)	**(Moving out of Kindergarten**		Use comparing words	Compare	Variety of objects

Measure lengths indirectly and by iterating length units 1. MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.	**into 1st grade)** **Explore other measurement attributes** M.PS.00.05 Compare length and weight of objects by comparing to reference objects, and use terms such as shorter, longer, taller, lighter, heavier.		to describe objects in reference to other objects Object sort	Objects Length Weight Capacity Shorter Longer Taller	Balance scale
[Not in the Common Core State Standards]	**(Moving out of Kindergarten)** **Explore concepts of time**[1] M.UN.00.01 Know and use the common words for the parts of the day (morning, afternoon, evening, night) and relative time (yesterday, today, tomorrow, last week, next year). M.TE.00.02 Identify tools that measure time (clocks measure hours and minutes; calendars measure days, weeks, and months). M.UN.00.03 Identify daily landmark times to the nearest hour (lunchtime is 12 o'clock; bedtime is 8 o'clock).		Observation Calendar time Use correct tools to measure time Relate times of subjects/daily activities to hours Matching activities-match pictur to landmark times	Morning Afternoon Evening Night Yesterday Today Tomorrow Last week Next year Hours Minutes Calendar Month	Calendar Clock Pocket Chart Daily Schedule The Grouchy Ladybug by Eric Carle

[1] Not previously linked to a focal point