Kindergarten
Math Pacing Guide (2010-2011)

Board Approved Curriculum: *Investigations*

Timeline	Topics	Indicators	Benchmarks	Aligned Instructional Resources	Assessments
8/25/10 to 9/22/10 (20 Days)	Attendance Routine Calendar Routine The Counting Jar Today's Question Routine	N2. Explain rules of counting, such as each object should be counted once and that order does not change the number.	NF. Count, using numerals and ordinal numbers.	Investigations Unit 1 ***Who is in School Today?***	End-of-Unit (Common Assessment)
		N3. Count to twenty; e.g., in play situations or while reading number books.			
		N4. Determine "how many" in sets (groups) of 10 or fewer objects.			
		N5. Relate, read and write numerals for single-digit numbers (0 to 9).	NA. Use place value concepts to represent whole numbers using numerals, words and physical models.		
		N6. Construct multiple sets of objects each containing the same number of objects.	NI. Model, represent and explain multiplication as repeated addition, rectangular arrays and skip counting.		
		N10. Model and represent addition as combining sets and counting on, and subtraction as take- away and comparison. For example: a. Combine and separate small sets of objects in contextual situations; e.g., add or subtract one, two, or another small amount. b. Count on (forward) and count back (backward) on a number line between 0 and 10.	NG. Model, represent and explain addition as combining sets and counting on. NH. Model, represent and explain subtraction as comparison, take-away and part-to-whole.		
		M1. Identify units of time (day, week, month, year) and compare calendar elements; e.g., weeks are longer than days.	MB. Select appropriate units for length, weight, volume (capacity) and time, using: • objects; i.e., non-standard units; • U.S. customary units: inch, foot, yard, ounce, pound, cup, quart, gallon, minute, hour, day, week and year; • metric units: centimeter, meter, gram and liter. MC. Develop common referents for units of measure for length, weight, volume (capacity) and time to make comparisons and estimates.		
		M4. Order events based on time. For example: a. activities that take a long or short time; b. review what we do first, next, last; c. recall what we did or plan to do yesterday, today, tomorrow.	MC. Develop common referents for units of measure for length, weight, volume (capacity) and time to make comparisons and estimates.		
		G1. Identify and sort two- dimensional shapes and three- dimensional objects. For example: a. Identify and describe two-dimensional figures and three-dimensional objects from the environment using the child's own vocabulary. b. Sort shapes and objects into groups based on student-defined categories. c. Select all shapes or objects of one type from a group. d. Build two-dimensional figures using paper shapes or tangrams; build simple three-dimensional objects using blocks.	GC. Sort and compare two-dimensional figures and three-dimensional objects according to their characteristics and properties.		
		G2 Name and demonstrate the relative position of objects as follows: a. place objects over, under, inside, outside, on, beside, between, above, below, on top of, upside-down, behind, in back of, in front of; b. describe placement of objects with terms such as on, inside, outside, above, below, over, under, beside, between, in front of, behind	GF. Describe location, using comparative (before, after), directional (above, below), and positional (first, last) words		

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8/25/10 to 9/22/10 (con't.)	Attendance Routine Calendar Routine The Counting Jar Today's Question Routine	P1 Sort, classify and order objects by size, number and other properties. For example: a. Identify how objects are alike and different. b. Order three events or objects according to a given attribute, such as time or size. c. Recognize and explain how objects can be classified in more than one way d. Identify what attribute was used to sort groups of objects that have already been sorted.	PA. Sort, classify, and order objects by size, number, and other properties, and describe the attributes used.	Investigations Unit 1 ***Who is in School Today?*** (Con't.)	End-of-Unit (Common Assessment)
		P2. Identify, create, extend and copy sequences of sounds (such as musical notes), shapes (such as buttons, leavesorblocks), motions (such as hops or skips), and numbers from 1 to 10.	PB. Extend sequences of sounds and shapes or simple number patterns, and create and record similar patterns.		
		P3. Describe orally the pattern of a given sequence.	PC. Create and extend patterns and describe the rule in words.		
		P4. Model a problem situation using physical materials.	PD. Model problem situations using objects, pictures, tables, numbers, letters, and other symbols.		
		D1. Gather and sort data in response to questions posed by teacher and students; e.g., how many sisters and brothers, what color shoes.	DA. Pose questions and gather data about everyday situations and familiar objects.		
		D2. Arrange objects in a floor or table graph according to attributes, such as use, size, color, or shape.	PB. Extend sequences of sounds and shapes or simple number patterns, and create and record similar patterns.		
		D3. Select the category or categories that have the most or fewest objects in a floor or table graph.			
9/23/10 to 11/1/10 (28 Days)	Counting a set of 10 objects Comparing lengths Comparing quantities (up to 10)	N1. Compare and order whole numbers up to 10.	NB. Recognize, classify, compare and order whole numbers.	Investigations Unit 2 ***Counting and Comparing***	End-of-Unit (Common Assessment)
		N7. Compare the number of objects in two or more sets when one set has one or two more, or one or two fewer objects.			
		N13. Recognize the number or quantity of sets up to 5 without counting; e.g., recognize without counting the dot arrangement on a domino as 5.			
		N2. Explain rules of counting, such as each object should be counted once and that order does not change the number.	NF. Count, using numerals and ordinal numbers.		
		N3. Count to twenty; e.g., in play situations or while reading number books.			
		N4. Determine “how many” in sets (groups) of 10 or fewer objects.			
		N5. Relate, read and write numerals for single-digit numbers (0 to 9).	NA. Use place value concepts to represent whole numbers using numerals, words and physical models.		
		N6. Construct multiple sets of objects each containing the same number of objects.	NI. Model, represent and explain multiplication as repeated addition, rectangular arrays and skip counting.		
		N8. Represent and use whole numbers in flexible ways, including relating, composing and decomposing numbers; e.g.,5marblescanbe2red and 3 green or 1 red and 4 green.	NK. Demonstrate fluency in addition facts with addends through 9 and corresponding subtractions. NG. Model, represent and explain addition as combining sets and counting on. NH. Model, represent and explain subtraction as comparison, take-away and part-to-whole.		
		N10. Model and represent addition as combining sets and counting on, and subtraction as take- away and comparison. For example: a. Combine and separate small sets of objects in contextual situations; e.g., add or subtract one, two, or another small amount	NG. Model, represent and explain addition as combining sets and counting on. NH. Model, represent and explain subtraction as comparison, take-away and part-to-whole.		

Kindergarten
Math Pacing Guide (2010-2011)

Board Approved Curriculum: *Investigations*

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9/23/10 to 11/1/10 (Con't.)	Counting a set of 10 objects Comparing lengths Comparing quantities (up to 10)	M2. Compare and order objects of different lengths, areas, weights and capacities; and use relative terms, such as longer, shorter, bigger, smaller, heavier, lighter, more and less.	MB. Select appropriate units for length, weight, volume (capacity) and time, using: • objects; i.e., non-standard units; • U.S. customary units: inch, foot, yard, ounce, pound, cup, quart, gallon, minute, hour, day, week and year; • metric units: centimeter, meter, gram and liter. MC. Develop common referents for units of measure for length, weight, volume (capacity) and time to make comparisons and estimates.	Investigations Unit 2 ***Counting and Comparing*** *(Con't.)*	End-of-Unit (Common Assessment)
		P1 Sort, classify and order objects by size, number and other properties. For example: a. Identify how objects are alike and different. b. Order three events or objects according to a given attribute, such as time or size. c. Recognize and explain how objects can be classified in more than one way d. Identify what attribute was used to sort groups of objects that have already been sorted.	PA. Sort, classify, and order objects by size, number, and other properties, and describe the attributes used.		
		P4. Model a problem situation using physical materials.	PD. Model problem situations using objects, pictures, tables, numbers, letters, and other symbols.		
		D2. Arrange objects in a floor or table graph according to attributes, such as use, size, color, or shape.	DB. Sort and classify objects by attributes, and organize data into categories in a simple table or chart.		
		D3. Select the category or categories that have the most or fewest objects in a floor or table graph.			
11/2/10 to 12/10/10 (26 Days)	Copy, construct, & extend patterns (AB and ABC) Identify the unit of a repeating pattern	N2. Explain rules of counting, such as each object should be counted once and that order does not change the number.	NF. Count, using numerals and ordinal numbers.	Investigations Unit 3 ***What Comes Next?***	End-of-Unit (Common Assessment)
		N3. Count to twenty; e.g., in play situations or while reading number books.			
		N4. Determine “how many” in sets (groups) of 10 or fewer objects.			
		N5. Relate, read and write numerals for single-digit numbers (0 to 9).	NA. Use place value concepts to represent whole numbers using numerals, words and physical models.		
		N8. Represent and use whole numbers in flexible ways, including relating, composing and decomposing numbers; e.g.,5marblescanbe2red and 3 green or 1 red and 4 green.	NK. Demonstrate fluency in addition facts with addends through 9 and corresponding subtractions. NG. Model, represent and explain addition as combining sets and counting on. NH. Model, represent and explain subtraction as comparison, take-away and part-to-whole.		
		N13. Recognize the number or quantity of sets up to 5 without counting; e.g., recognize without counting the dot arrangement on a domino as 5.	NB. Recognize, classify, compare and order whole numbers.		
		G1. Identify and sort two- dimensional shapes and three- dimensional objects. For example: a. Identify and describe two-dimensional figures and three-dimensional objects from the environment using the child’s own vocabulary. b. Sort shapes and objects into groups based on student-defined categories	GC. Sort and compare two- dimensional figures and three- dimensional objects according to their characteristics and properties.		

Kindergarten
Math Pacing Guide (2010-2011)

Board Approved Curriculum: *Investigations*

Timeline	Topics	Indicators	Benchmarks	Aligned Instructional Resources	Assessments
11/2/10 to 12/10/10 (Con't.)	Copy, construct, & extend patterns (AB and ABC) Identify the unit of a repeating pattern	P1 Sort, classify and order objects by size, number and other properties. For example: a. Identify how objects are alike and different. b. Order three events or objects according to a given attribute, such as time or size. c. Recognize and explain how objects can be classified in more than one way d. Identify what attribute was used to sort groups of objects that have already been sorted.	PA. Sort, classify, and order objects by size, number, and other properties, and describe the attributes used.	Investigations Unit 3 What Comes Next? (Con't.)	End-of-Unit (Common Assessment)
		P2. Identify, create, extend and copy sequences of sounds (such as musical notes), shapes (such as buttons, leavesorblocks),motions (such as hops or skips), and numbers from 1 to 10.	PB. Extend sequences of sounds and shapes or simple number patterns, and create and record similar patterns.		
		P4. Model a problem situation using physical materials.	PD. Model problem situations using objects, pictures, tables, numbers, letters, and other symbols.		
12/13/10 to 2/7/11 (30 Days)	Measure the length of an object Count a set up to 15 objects Determine "one more" or "one less"	N1. Compare and order whole numbers up to 10.	NB. Recognize, classify, compare and order whole numbers.	Investigations Unit 4 ***Measuring and Counting***	End-of-Unit (Common Assessment)
		N7. Compare the number of objects in two or more sets when one set has one or two more, or one or two fewer objects.			
		N13. Recognize the number or quantity of sets up to 5 without counting; e.g., recognize without counting the dot arrangement on a domino as 5.			
		N2. Explain rules of counting, such as each object should be counted once and that order does not change the number.	NF. Count, using numerals and ordinal numbers.		
		N3. Count to twenty; e.g., in play situations or while reading number books.			
		N4. Determine "how many" in sets (groups) of 10 or fewer objects.			
		N5. Relate, read and write numerals for single-digit numbers (0 to 9).	NA. Use place value concepts to represent whole numbers using numerals, words and physical models.		
		N9. Identify and state the value of a penny, nickel and dime.	ND. Determine the value of a collection of coins and dollar bills.		
		N12. Partition or share a small set of objects into groups of equal size; e.g., sharing 6 stickers equally among 3 children.	NJ. Model, represent and explain division as sharing equally, repeated subtraction and rectangular arrays.		
		N8. Represent and use whole numbers in flexible ways, including relating, composing and decomposing numbers; e.g.,5marblescanbe2red and 3 green or 1 red and 4 green.	NK. Demonstrate fluency in addition facts with addends through 9 and corresponding subtractions. NG. Model, represent and explain addition as combining sets and counting on. NH. Model, represent and explain subtraction as comparison, take-away and part-to-whole.		
		N10. Model and represent addition as combining sets and counting on, and subtraction as take- away and comparison. For example: a. Combine and separate small sets of objects in contextual situations; e.g., add or subtract one, two, or another small amount	NG. Model, represent and explain addition as combining sets and counting on. NH. Model, represent and explain subtraction as comparison, take-away and part-to-whole.		
		M2. Compare and order objects of different lengths, areas, weights and capacities; and use relative terms, such as longer, shorter, bigger, smaller, heavier, lighter, more and less.	MB. Select appropriate units for length, weight, volume (capacity) and time, using: • objects; i.e., non-standard units; • U.S. customary units: inch, foot, yard, ounce, pound, cup, quart, gallon, minute, hour, day, week and year; • metric units: centimeter, meter, gram and liter. MC. Develop common referents for units of measure for length, weight, volume (capacity) and time to make comparisons and estimates.		

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Timeline	Topics	Indicators	Benchmarks	Aligned Instructional Resources	Assessments
12/13/10 to 2/7/11 (Con't.)	Measure the length of an object Count a set up to 15 objects Determine "one more" or "one less"	M3. Measure length and volume (capacity) using uniform objects in the environment. For example, find: a. how many paper clips long is a pencil; b. how many small containers it takes to fill one big container using sand, rice, beans.	MD. Apply measurement techniques to measure length, weight and volume (capacity).	Investigations Unit 4 ***Measuring and Counting*** (Con't.)	End-of-Unit (Common Assessment)
		P1 Sort, classify and order objects by size, number and other properties. For example: a. Identify how objects are alike and different. b. Order three events or objects according to a given attribute, such as time or size. c. Recognize and explain how objects can be classified in more than one way d. Identify what attribute was used to sort groups of objects that have already been sorted.	PA. Sort, classify, and order objects by size, number, and other properties, and describe the attributes used.		
		P4. Model a problem situation using physical materials.	PD. Model problem situations using objects, pictures, tables, numbers, letters, and other symbols.		
2/8/11 to 3/7/11 (18 Days)	Represent a set of data Use data to solve a problem Sort objects by attributes	N2. Explain rules of counting, such as each object should be counted once and that order does not change the number.	NF. Count, using numerals and ordinal numbers.	Investigations Unit 7 ***Sorting and Surveys***	End-of-Unit (Common Assessment)
		N3. Count to twenty; e.g., in play situations or while reading number books.			
		N4. Determine "how many" in sets (groups) of 10 or fewer objects.			
		N5. Relate, read and write numerals for single-digit numbers (0 to 9).	NA. Use place value concepts to represent whole numbers using numerals, words and physical models.		
		N6. Construct multiple sets of objects each containing the same number of objects.	NI. Model, represent and explain multiplication as repeated addition, rectangular arrays and skip counting.		
		N11. Demonstrate joining multiple groups of objects, each containing the same number of objects; e.g., combining 3 bags of candy, each containing 2 pieces.			
		N10. Model and represent addition as combining sets and counting on, and subtraction as take- away and comparison. For example: a. Combine and separate small sets of objects in contextual situations; e.g., add or subtract one, two, or another small amount	NG. Model, represent and explain addition as combining sets and counting on. NH. Model, represent and explain subtraction as comparison, take-away and part-to-whole.		
		N12. Partition or share a small set of objects into groups of equal size; e.g., sharing 6 stickers equally among 3 children.	NJ. Model, represent and explain division as sharing equally, repeated subtraction and rectangular arrays.		
		G1. Identify and sort two- dimensional shapes and three- dimensional objects. For example: a. Identify and describe two-dimensional figures and three-dimensional objects from the environment using the child's own vocabulary. b. Sort shapes and objects in	GC. Sort and compare two- dimensional figures and three- dimensional objects according to their characteristics and properties.		
		P1 Sort, classify and order objects by size, number and other properties. For example: a. Identify how objects are alike and different. b. Order three events or objects according to a given attribute, such as time or size. c. Recognize and explain how objects can be classified in more than one way d. Identify what attribute was used to sort groups of objects that have already been sorted.	PA. Sort, classify, and order objects by size, number, and other properties, and describe the attributes used.		
		P2. Identify, create, extend and copy sequences of sounds (such as musical notes), shapes (such as buttons, leavesorblocks),motions (such as hops or skips), and numbers from 1 to 10.	PB. Extend sequences of sounds and shapes or simple number patterns, and create and record similar patterns.		

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2/8/11 to 3/7/11 (Con't.)	Represent a set of data Use data to solve a problem Sort objects by attributes	P4. Model a problem situation using physical materials.	PD. Model problem situations using objects, pictures, tables, numbers, letters, and other symbols.	Investigations Unit 7 ***Sorting and Surveys*** (Con't.)	End-of-Unit (Common Assessment)
		D1. Gather and sort data in response to questions posed by teacher and students; e.g., how many sisters and brothers, what color shoes.	DA. Pose questions and gather data about everyday situations and familiar objects.		
		D2. Arrange objects in a floor or table graph according to attributes, such as use, size, color, or shape.	DB. Sort and classify objects by attributes, and organize data into categories in a simple table or chart.		
		D3. Select the category or categories that have the most or fewest objects in a floor or table graph.			
3/8/11 to 4/25/11 (28 Days)	Write numbers upt o 10 Count a set of 20 objects Combine two quantities	N1. Compare and order whole numbers up to 10.	NB. Recognize, classify, compare and order whole numbers.	Investigations Unit 6 **How Many Do You Have?**	End-of-Unit (Common Assessment)
		N7. Compare the number of objects in two or more sets when one set has one or two more, or one or two fewer objects.			
		N13. Recognize the number or quantity of sets up to 5 without counting; e.g., recognize without counting the dot arrangement on a domino as 5.			
3/8/11 to 4/25/11 (Con't.)	Write numbers upt o 10 Count a set of 20 objects Combine two quantities	N2. Explain rules of counting, such as each object should be counted once and that order does not change the number.	NF. Count, using numerals and ordinal numbers.	Investigations Unit 6 ***How Many Do You Have?*** (Con't.)	End-of-Unit (Common Assessment)
		N3. Count to twenty; e.g., in play situations or while reading number books.			
		N4. Determine "how many" in sets (groups) of 10 or fewer objects.			
		N5. Relate, read and write numerals for single-digit numbers (0 to 9).	NA. Use place value concepts to represent whole numbers using numerals, words and physical models.		
		N6. Construct multiple sets of objects each containing the same number of objects.	NI. Model, represent and explain multiplication as repeated addition, rectangular arrays and skip counting.		
		N11. Demonstrate joining multiple groups of objects, each containing the same number of objects; e.g., combining 3 bags of candy, each containing 2 pieces.			
		N8. Represent and use whole numbers in flexible ways, including relating, composing and decomposing numbers; e.g.,5 marbles can be 2 red and 3 green or 1 red and 4 green.	NK. Demonstrate fluency in addition facts with addends through 9 and corresponding subtractions. NG. Model, represent and explain addition as combining sets and counting on. NH. Model, represent and explain subtraction as comparison, take-away and part-to-whole.		
		N10. Model and represent addition as combining sets and counting on, and subtraction as take- away and comparison. For example: a. Combine and separate small sets of objects in contextual situations; e.g., add or subtract one, two, or another small amount	NG. Model, represent and explain addition as combining sets and counting on. NH. Model, represent and explain subtraction as comparison, take-away and part-to-whole.		
		M3. Measure length and volume (capacity) using uniform objects in the environment. For example, find: a. how many paper clips long is a pencil; b. how many small containers it takes to fill one big container using sand, rice, beans.	MD. Apply measurement techniques to measure length, weight and volume (capacity).		
		P4. Model a problem situation using physical materials.	PD. Model problem situations using objects, pictures, tables, numbers, letters, and other symbols.		

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4/26/11 to 5/25/11 (23 Days)	Describe size, shape, features (2-D and 3-D shapes) Build 2-D and 3-D shapes	N2. Explain rules of counting, such as each object should be counted once and that order does not change the number.	NF. Count, using numerals and ordinal numbers.	Investigations Unit 5 ***Make a Shape, Build a Block***	End-of-Unit (Common Assessment)
		N3. Count to twenty; e.g., in play situations or while reading number books.			
		N4. Determine "how many" in sets (groups) of 10 or fewer objects.			
		N5. Relate, read and write numerals for single-digit numbers (0 to 9).	NA. Use place value concepts to represent whole numbers using numerals, words and physical models.		
		M3. Measure length and volume (capacity) using uniform objects in the environment. For example, find: a. how many paper clips long is a pencil; b. how many small containers it takes to fill one big container using sand, rice, beans.	MD. Apply measurement techniques to measure length, weight and volume (capacity).		
		G1. Identify and sort two- dimensional shapes and three- dimensional objects. For example: a. Identify and describe two-dimensional figures and three-dimensional objects from the environment using the child's own vocabulary. b. Sort shapes and objects into groups based on student-defined categories. c. Select all shapes or objects of one type from a group. d. Build two-dimensional figures using paper shapes or tangrams; build simple three-dimensional objects using blocks.	GC. Sort and compare two- dimensional figures and three- dimensional objects according to their characteristics and properties.		
		G2 Name and demonstrate the relative position of objects as follows: a. place objects over, under, inside, outside, on, beside, between, above, below, on top of, upside-down, behind, in back of, in front of; b. describe placement of objects with terms such as on, inside, outside, above, below, over, under, beside, between, in front of, behind.	GF. Describe location, using comparative (before, after), directional (above, below), and positional (first, last) words.		
		P4. Model a problem situation using physical materials.	PD. Model problem situations using objects, pictures, tables, numbers, letters, and other symbols.		