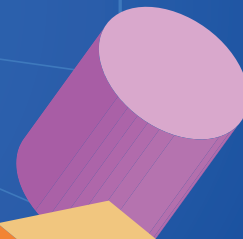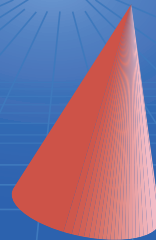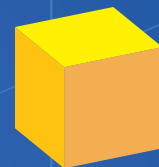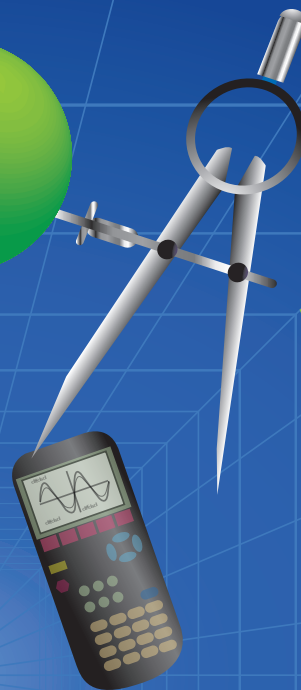# CURRICULUM PACING GUIDE

FOURTH GRADE

2008

Curriculum and Instruction

THE SCHOOL BOARD OF MIAMI-DADE COUNTY, FLORIDA

Miami-Dade County Public Schools
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Fourth Grade Mathematics Curriculum Pacing Guide

OVERVIEW

This document provides a mathematics curriculum pacing guide for fourth grade. It is designed to help teachers pace the instruction that students are expected to learn and be able to do within a specific nine-week period.

Purpose:

The *Fourth Grade Mathematics Curriculum Pacing Guide* was formulated for the purpose of providing teachers with a "road map" for the year. The Division of Mathematics Education responded to the request of administrators and teachers in the field to create a guide that will serve as a **resource** for teachers. This guide was locally developed and reviewed by District Supervisors, District Curriculum Support Specialists and selected classroom teachers. The guide can be downloaded from http://math.dadeschools.net/
In addition, district interim assessment is aligned to this pacing document.

Description:

The *Fourth Grade Mathematics Curriculum Pacing Guide* specifies the content to be covered within each nine-week instructional period. This guide identifies the Sunshine State Standards (SSS) Benchmarks/Grade Level Expectations. Furthermore, it allows teachers to input information regarding textbook correlations.

- **Column One – Instructional Blocks:**
  Numbers the Instructional Blocks. Instructional Blocks are clusters of teaching concepts arranged by SSS Benchmarks/Grade Level Expectations. Teachers should view these blocks as material to be covered as a unit and **NOT** as a weekly sequence. Blocks may be taught in different sequences as long as the instruction is completed within each nine-week period.

- **Column Two – Benchmarks/Grade Level Expectations:**
  Contains the SSS Benchmarks/Grade Level Expectations for fourth grade.

- **Column Three – Content Limits for Test Items:**
  Contains the Content Limits delineated by the FCAT Test Item Specifications. Because benchmarks are very broad and encompass multiple topics, teachers should be aware of the Content Limits.

- **Column Four – Page(s) in Textbook:**
  Provides a place for teachers to correlate the Benchmarks/Grade Level Expectations to the adopted textbook.

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- **Column Five – Vocabulary:**
  Contains the terms defined in the FCAT Test Item Specifications that pertain to the Sunshine State Standards in mathematics for fourth grade.

- **Column Six – Manipulatives:**
  Contains suggested manipulatives that can be used for hands-on instruction.

Suggestions for Implementing the *Fourth Grade Mathematics Curriculum Pacing Guide*

The role of the teacher is to:

- teach students the state's SSS content matter.

- provide classroom activities that address the SSS.

- enhance the curriculum by using textbooks, manipulatives, technology, and other instructional materials.

- use varying methods of instruction to address diverse learning styles.

- administer teacher-made assessments.

In addition to using the *Fourth Grade Mathematics Curriculum Pacing Guide,* teachers should:

- consider intra-school collaborative planning and spiraling of the curriculum to ensure efficient and effective pacing and delivery of instruction.

- adjust pacing and discuss progress with peers.

- document questions and suggested improvement of the guide for further support and future revisions.

- align and connect mathematics literature to support reading.

- visit the Division's website at http://math.dadeschools.net/ for additional resources.

If you have comments or suggestions to improve this document, please contact one of the District Instructional Supervisors,

Elementary Mathematics: Mrs. Maria Teresa Diaz-Gonzalez at 305-995-2763, or Dr. Elton Hilton at 305-995-2817.

Fourth Grade Mathematics Curriculum Pacing Guiding

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
1	**MA.A.1.2.1** • Reads, writes, and identifies whole numbers through millions or more.			Refer to instructional materials for suggested vocabulary.	Refer to instructional materials for suggested use.
	MA.A.1.2.2 • Compares and orders whole numbers through millions or more, using concrete materials, number lines, drawings, numerals.	• Words, number lines, drawings, numerals, or symbols ($<$, $=$, $>$). • Graphics should be used in at least 70% of these items.		less than, greater than, equal to	number line, hundreds chart, place value chart
	MA.A.2.2.1 • Knows the value of a given digit in numbers through millions.	• Expanded form will not be assessed. • Graphics should be used in at least 30% of these items.		place value, hundreds chart	base ten blocks
2	**MA.A.3.2.1** • Recalls (from memory) basic multiplication facts and related division facts. • Knows the inverse relationship of multiplication and division and demonstrates that relationship by writing related fact families. • Explains and demonstrates the multiplication and division of whole numbers using manipulatives, drawings, and algorithms. • Knows the properties of numbers including the following: the identity, commutative, and associative properties of addition, zero and identity properties of multiplication, commutative, associative, and distributive properties of multiplication.	• Items will assess the effects of multiplication and division of whole numbers. • Students should be asked to recognize examples of the properties, not name the properties. • Items will assess the identity, commutative, and associative properties of addition; and the zero, identity, and commutative properties of multiplication and addition.		properties, fact families, algorithms, associative property, zero property,	Refer to instructional materials for suggested use.

Fourth Grade Mathematics Curriculum Pacing Guiding

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
2 (Continued)	**MA.A.5.2.1** • Knows factors and multiples of numbers to 100. • Multiplies by 10, 100, and 1,000 recognizing and demonstrating patterns. • Knows rules of divisibility for 2, 3, 5, 9, and 10.	• Knows rules of divisibility for 2, 3, 5, 9, and 10. • Graphics should be used in at least 30% of these items.		factors, product, rules of divisibility, multiples	hundreds chart
3	**MA.E.1.2.1** • Knows the purpose of different parts of a graph (for example, titles, labels, intervals, key). • Chooses reasonable titles and labels for graphs. • Interprets and compares information from different types of graphs including graphs from content-area materials and periodicals. • Generates questions, collects responses, and displays data on a pictograph, circle graph, bar, double bar, or line graph. • Analyzes and explains orally or in writing the implications of data displays.	• Identify different parts of an accurate graph. • Titles should be worded appropriately for grade level. • Interpret and compare information from charts, pictographs, single and double bar graphs, or single line graphs. • Scale increments should include units 1, 2, 5, or 10 and grid lines should be used. • Data presented should represent five or fewer categories. • Graphics should be used in 100% of these items.		parts of a graph, title, labels, intervals, key, data table pictograph, bar graph, double bar graph, line graph, x-axis, y-axis, horizontal, vertical	color tiles, graph paper, cubes
	MA.E.1.2.2 • Identifies the mean, median, and mode from a set of data.	• Data sets should contain no more than seven two-digit numbers (except money) and a sum that can easily be divided without a remainder. • When assessing mean, data sets should contain no more than five two-digit numbers and a sum that can easily be divided without a remainder.		mean, median, mode, and range	Refer to instructional materials for suggested use.

1st Nine Weeks 2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
3 (Continued)	**MA.E.1.2.2 (Continued)**	• Items will use sets of numerical data, pictures, charts, or simple graphs with unit scales. • Graphics should be used in at least 70% of these items.			
4	**MA.B.1.2.1** • Knows measurement concepts and uses oral and written language to communicate them. *Note: customary and metric systems should be taught independently of one another.*				
	MA.B.2.2.2 • Knows an appropriate unit of measure to determine the dimension(s) of a given object (for example, standard - student chooses feet or inches instead of yards to measure a classroom desk; nonstandard - student chooses a pencil or his or her hand to measure a classroom desk). • Knows an appropriate unit of measure (standard or nonstandard) to measure weight, temperature and capacity. *Note: customary and metric systems should be taught independently of one another.*	• Determine appropriate measures of length, weight, or capacity for common objects. • Customary and metric units may be used, but not in the same item. • Graphics should be used in at least 50% of these items.		standard and nonstandard measurement	paper clips, rulers, nonstandard tools, standard tools measurement tools

Fourth Grade Mathematics Curriculum Pacing Guiding

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
4 (Continued)	**MA.B.4.2.2** • Selects and uses the appropriate tool for situational measures (for example, measuring sticks, scales and balances, thermometers, measuring cups, gauges). *Note: customary and metric systems should be taught independently of one another.*	• Graphics of measuring instruments should be labeled. • Instrument or tools to be selected or used should be common measuring devices familiar to the grade. • Graphics should be used in at least 70% of these items.		measuring stick, scale, balance scale, thermometer, measuring cups, gauges	measurement tools
5	**MA.B.3.2.1** • Using real-world settings, objects, graph paper, or charts, solves problems involving estimated measurements including the following: ➤ length to nearest half-inch, centimeter ➤ weight to nearest ounce, gram *Note: customary and metric systems should be taught independently of one another.*			estimate, length, foot inch, meter centimeter, weight, pound, ounces, grams, kilogram	rulers, graph paper, scales, balance scale
	MA.B.1.2.2 • Solves real-world problems involving measurement of the following: ➤ length (for example, millimeter, quarter-inch, foot, yard, meter) ➤ weight (for example, pounds, ounces, kilograms, grams) *Note: customary and metric systems should be taught independently of one another.*	• May include standard units of measurement in inches, feet, yards, or miles; ounces, pounds, or tons; or metric units of measurement in centimeters, meters, kilometers, grams, kilograms.		miles, kilometers	rulers, meter stick, yard stick, tape measure,

Fourth Grade Mathematics Curriculum Pacing Guiding

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
5 (Continued)	**MA.B.2.2.1** • Devises nonstandard, indirect ways to compare lengths (for example, compare the height of a cylinder to the distance around it). • Uses customary and metric units to compare length, weight, and capacity or volume. ***Note: customary and metric systems should be taught independently of one another.***	• Assess comparison of length, weight, or capacity. • May use nonstandard units, standard customary units or standard metric units. • Items should involve one conversion. • Graphics should be used in at least 30% of these items.		nonstandard, customary, and metric units, convert, gram, centimeters	measuring tools, scales and balances, thermometers, measuring cups, gauges
6	**MA.A.3.2.3** • Solves real-world multiplication problems with whole numbers (three digits by one digit) using concrete materials, drawings, pencil and paper. • Solves real-world division problems having divisors of one digit and dividends of three digits, with or without remainders. • Solves real world problems involving addition, subtraction, multiplication and division of whole numbers.	• Limited to one- or two-operations only. • Set in real-world context. • Graphics should be used in some of these items.			
	MA.A.3.2.2 Uses problem-solving strategies to determine the operation(s) needed to solve one- and two-step problems involving addition, subtraction, multiplication, and division of whole numbers.	• Should include addition, subtraction, multiplication, and division of whole numbers. • Answer choices should be expressions or number sentences, not merely operation symbols.		number sentences, operation symbols, estimation	

1st Nine Weeks 2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
7	**MA.C.1.2.1** • Uses appropriate geometric vocabulary to describe properties and attributes of two- and three-dimensional figures (for example, faces, edges, vertices, diameter). • Draws and classifies two-dimensional figures having up to eight or more sides.	• May assess regular or irregular polygons up to 8 sides; circles; diameter; acute, right, obtuse and straight angles; sides, bases, and vertices; points, lines and line segments; parallel and perpendicular lines; or rays and planes. • Items should use only two-dimensional figures. • Graphics should be used in 100% of these items.		attribute, two-dimensional shapes, faces, hexagon, vertex, rhombus, triangle, hexagon, octagon, quadrilateral, pentagon, trapezoid, equilateral, edges, vertices, nets, figure, closed figure	grid paper, geometric solids, nets
	MA.B.1.2.1 • Investigates angle measures using models and manipulatives for the common angles 45°, 90°, and 180° (straight angle) and uses these angles as reference points for measures of other angles.			parallel, perpendicular, intersecting	Refer to instructional materials for suggested use.
	MA.C.2.2.1 • Uses manipulatives to solve problems requiring spatial visualization. • Knows symmetry, congruency, and reflections in geometric figures using drawings and concrete materials (for example, pattern blocks, mirrors). • Knows and creates congruent and similar figures.	• Items should use only two-dimensional shapes. • Graphics should be used in 100% of these items.		symmetry, congruent, reflection	pattern blocks, mirrors

Fourth Grade Mathematics Curriculum Pacing Guiding

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives

8	**MA.D.1.2.1**
	• Describes, extends, and creates numerical and geometric patterns using a variety of models (for example, lists, tables, charts).
	
	• Poses, solves, and explains problems by identifying a predictable visual or numerical pattern such as:
	
	    Input 1 2 3 7
	
	    Output $3 $6 $9 ?
		• Operations in patterns such as function tables will be limited to addition, subtraction, or multiplication.
		
		• Should not be asked to extend the pattern more than three steps beyond what is given.
		
		• Pattern given should be shown with at least two examples of the pattern repeated.
		
		• A repeating pattern set should contain no more than four elements.
		
		• Graphics should be used in at least 70% of these items.
				geometric patterns, numerical patterns, input, out put, algebraic symbols, repeating patterns, growing patterns, tables, charts	Refer to instructional materials for suggested use.

9	**MA.B.1.2.1** • Uses a wide variety of models (for example, manipulatives, diagrams) and applies counting procedures to investigate measurements of length, area, volume, and perimeter. • Knows measurement concepts and uses oral and written language to communicate them.			perimeter, area, volume	color tiles, cubes, geometric solids
	MA.B.3.2.1 • Knows how to estimate the area and perimeter of regular and irregular polygons using graph paper, geoboard, or other objects.			quadrant, irregular polygons	Geoboards
	MA.B.1.2.2 • Solves real-world problems involving perimeter, area, and volume using concrete, graphic or pictorial models.	• Graphic models will be used to assess perimeter area. • Graphics should be used in at least 70% of these items.			

1st Nine Weeks 2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
9 (Continued)	**MA.C.3.2.1** • Compares the concepts of area and perimeter using concrete materials (for example, colored tiles, grid paper) and real world situations (for example, carpeting a floor, fencing a yard). • Applies the concepts of area and perimeter to solve real-world and mathematical problems. • Knows how area and perimeter are affected when geometric figures are combined.	• Concepts of area and perimeter of rectangles or composite figures made of rectangles. • Presented either on a grid, using only quadrant one, or in picture form. • Graphics should be used in 100% of these items.		area, perimeter, volume, dimensions	Color tiles, grid paper, pentominoes

2nd Nine Weeks 2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
10	**MA.A.1.2.1** • Reads, writes, and identifies fractions and mixed numbers with denominators including 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 100, and 1000. • Reads, writes, and identifies decimals through hundredths.	• Numbers compared may be in the same form or in two different forms. Items comparing fractions with decimals, the denominator of the fraction should represent the same number of places as the decimal and leading zeros used. • Number lines may include whole numbers, proper fractions, mixed numbers, or decimals.		numerator, denominator, fractions, decimals	fraction bars, fractions strips
	MA.A.2.2.1 • Knows the value of a given digit in numbers from hundredths to millions, including writing and interpreting expanded forms of numbers.			expanded form	Refer to instructional materials for suggested use.
	MA.A.1.2.4 • Uses concrete materials to model equivalent forms of whole numbers, fractions, and decimals.	• Diagrams and models may be used to translate problem situations. • Graphics should be used in at least 50% of these items.		equivalent forms, non-equivalent	fraction bars, fraction strips, fraction circles, linking cubes

	MA.A.3.2.1
	• Predicts the relative size of solutions in the following:
	  ➢ addition and subtraction of common fractions
	  ➢ addition and subtraction of decimals to hundredths
	• Explains and demonstrates the addition and subtraction of common fractions using concrete materials, drawings, story problems, and algorithms.
	• Explains and demonstrates the addition and subtraction of decimals (to hundredths) using concrete materials, drawings, story problems, and algorithms.
		• Items will assess the effects of addition and subtraction of fractions, and decimals to hundredths;
		• Fractions will be limited to denominators of 2, 4, and 10 and decimals of 0.25, 0.50, and 0.75.
				number sentences, story problems, skip counting, doubles, properties	grid paper

2nd Nine Weeks 2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
11	**MA.E.2.2.1** • Represents all possible outcomes for a simple probability situation or event using models such as organized lists, charts, or tree diagrams. • Calculates the probability of a particular event occurring from a set of all possible outcomes.	• Should not assess more than 10 possible outcomes. • May use models such as organized lists, charts, or tree diagrams. • Graphics should be used in at least 70% of these items.		combinations, tree diagram, event	Refer to instructional materials for suggested use.
	MA.E.2.2.2 • Identifies and records using common fractions, the possible outcomes of simple experiments using concrete materials (for example, spinners, number cubes, coin toss). • Determines and predicts which outcomes are likely to occur and expresses those expected outcomes as fractions. • Conducts experiments to test predictions.	• Assess determining which outcomes are most likely, least likely, or equally likely to occur in certain situations. • Probabilities should be expressed as common fractions. • Graphics should be used in 100% of these items.		possible outcomes, most likely, least likely, or equally likely	spinners, marbles, coins, number cubes
12	**MA.C.2.2.1** • Uses manipulatives to solve problems requiring spatial visualization.	• Items should use only two-dimensional shapes. • Graphics should be used in 100% of these items.			pattern blocks
	MA.B.1.2.1 • Investigates angle measures using models and manipulatives for the common angles 45°, 90°, and 180° (straight angle) and uses these angles as reference points for measures of other angles.			parallel, perpendicular, intersecting	Refer to instructional materials for suggested use.
	MA.B.1.2.2 • Solves real-world problems involving measurement of the following: angles (right and straight).	• Measure of right and straight angles. • Graphics should be used in at least 70% of these items.		right and straight angles, line, line segment, ray	tangrams

2nd Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
12 (Continued)	**MA.C.2.2.2** • Identifies and performs flips, slides, and turns given angle (90°, 180°) and direction (clockwise or counterclockwise) of turn, using concrete and graphic materials (for example, pattern blocks, geoboards, grid paper). • Knows the effect of a flip, slide, or turn (90°, 180°) on a geometric figure.	• Students will identify the results of a single flip (reflection), slide (translation), or turn (rotation) of a given figure. • Items will assess flips, slides, and 90° 180° turns and their results on a geometric figure. • Graphics should be used in 100% of these items.		flip (reflection), slide (translation), turn (rotation), clockwise, counterclockwise	pattern blocks, geoboards, grid paper
	MA.D.1.2.2 • Knows mathematical relationships in patterns (for example, the second shape is the first shape turned 90°).	• Should not be asked to extend the pattern more than three steps beyond what is given or to provide more than three missing elements within a pattern. • Pattern given should be shown with at least two examples of the pattern repeated. • A repeating pattern set should contain no more than four elements. • Pattern repetition should be clearly divided by spaces or lines. • Graphics should be used in at least 70% of these items.			
13	**MA.D.1.2.2** • Analyzes number patterns and states rules for relationships (for example, 2, 4, 7, 9, 12, …; the rule is: +2, +3, +2, +3, …). • Discusses, explains, and analyzes the rule that applies to the pattern.	• Operations in patterns such as function tables will be limited to addition, subtraction, or multiplication. • Should not be asked to extend the pattern more than three steps beyond what is given or to provide more than three missing elements within a pattern. • Pattern given should be shown with at least two examples of the pattern repeated.		function tables, patterns, rules, input, output	Refer to instructional materials for suggested use.

2nd Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
13 (Continued)	**MA.D.1.2.2 (Continued)** • Applies the appropriate rule to complete a table or a chart such as: <table><tr><td>Input</td><td>Output</td></tr><tr><td>2</td><td>8</td></tr><tr><td>9</td><td>36</td></tr><tr><td>?</td><td>16</td></tr><tr><td>7</td><td>28</td></tr></table>	• A repeating pattern set should contain no more than four elements. • Pattern repetition should be clearly divided by spaces or lines. • Graphics should be used in at least 70% of these items.			
14	**MA.A.3.2.1** • Explains and demonstrates the multiplication and division of whole numbers using manipulatives, drawings, and algorithms. • Knows the properties of numbers including the following: the identity, commutative, and associative properties of addition, zero and identity properties of multiplication, commutative, associative, and distributive properties of multiplication. • Predicts the relative size of solutions in addition, subtraction, multiplication, and division of whole numbers.	• Items will assess the effects of multiplication and division of whole numbers. • Students should be asked to recognize examples of the properties, not name the properties. • Items will assess the identity, commutative, and associative properties of addition; and the zero, identity, and commutative properties of multiplication and addition.		properties, fact families, algorithms, associative property, zero property, denominator	Refer to instructional materials for suggested use.
15	**MA.A.3.2.3** • Solves real world problems involving addition, subtraction, multiplication and division of whole numbers	• Limited to one- or two-operations only • Set in real-world context • Graphics should be used in some of these items			

2nd Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
16	**MA.E.2.2.1** • Determines the number of possible combinations of given items and displays them in an organized way.	• Should not assess more than 10 possible outcomes. • May use models such as organized lists, charts, or tree diagrams. • Graphics should be used in at least 70% of these items.		combinations, tree diagram, list	Refer to instructional materials for suggested use.
17	**MA.B.1.2.1** • Knows measurement concepts and uses oral and written language to communicate them. ***Note: customary and metric systems should be taught independently of one another***				
	MA.B.3.2.1 • Knows how to determine whether an accurate or estimated measurement is needed for a solution.			estimate, length, foot inch, meter centimeter, weight, pound, ounces, grams, kilogram	
	MA.B.4.2.2 • Selects and uses the appropriate tool for situational measures (for example, measuring sticks, scales and balances, thermometers, measuring cups, gauges). ***Note: customary and metric systems should be taught independently of one another.***	• Graphics of measuring instruments should be labeled. • Instrument or tools to be selected or used should be common measuring devices familiar to the grade. • Graphics should be used in at least 70% of these items.		measuring stick, scale, balance scale, thermometer, measuring cups, gauges	measurement tools

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Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
17 (Continued)	**MA.B.4.2.1** • Selects an appropriate measurement unit for labeling the solution to real-world problems. *Note: customary and metric systems should be taught independently of one another.*			measurement unit	Refer to instructional materials for suggested use.
	MA.B.1.2.2 • Solves real-world problems involving measurement of the capacity (for example, cup, milliliters). *Note: customary and metric systems should be taught independently of one another.*	• Items will assess measurement of capacity (cups, pint, quarts, gallons, liter, and milliliters) • Graphics should be used in at least 70% of these items		capacity,	
18	**MA.A.5.2.1** • Multiplies by 10, 100, and 1,000 recognizing and demonstrating patterns.			multiples	Hundreds chart
	MA.B.2.2.1 • Devises nonstandard, indirect ways to compare lengths (for example, compare the height of a cylinder to the distance around it). • Uses customary and metric units to compare length, weight, and capacity or volume. • Uses multiplication and division to convert units of measure within either the customary or metric system (for example, 100 cm = 1m) *Note: customary and metric systems should be taught independently of one another.*	• Assess comparison of length, weight, or capacity. • May use nonstandard units, standard customary units or standard metric units. • Items should involve one conversion. • Graphics should be used in at least 30% of these items.		nonstandard, customary, and metric units, convert, gram, centimeters	measuring tools, scales and balances, thermometers, measuring cups, gauges

2nd Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
19	**MA.E.1.2.2** • Identifies the mean, median, and mode from a set of data. • Identifies the range on a line graph.	• Data sets should contain no more than seven two-digit numbers (except money) and a sum that can easily be divided without a remainder. • When assessing mean, data sets should contain no more than five two-digit numbers and a sum that can easily be divided without a remainder. • Items will use sets of numerical data, pictures, charts, or simple graphs with unit scales. • Graphics should be used in at least 70% of these items.		mean, median, mode, and range	Refer to instructional materials for suggested use.
	MA.E.3.2.1 • Designs a class survey to collect data. • Creates an appropriate graph to display data (for example, pictographs, bar graphs, line graphs, circle graphs). • Determines appropriate statistical measures for data (range, mean, median, mode). • Explains the results using statistics (range and measures of central tendency).	• Assessed through other benchmarks.		range, mean, median, mode, Venn Diagram, pictograph, bar graph, line graph	graph paper
20	**MA.B.3.2.1** • Using real-world settings, objects, graph paper, or charts, solves problems involving estimated measurements of temperature to the nearest five degree interval. *Note: customary and metric systems should be taught independently of one another.*				thermometer

2nd Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
20 (Continued)	**MA.B.1.2.2** • Solves real-world problems involving measurement of temperature (Fahrenheit and Celsius). *Note: customary and metric systems should be taught independently of one another.*				thermometer,
21	**MA.A.4.2.1** • Chooses, describes and explains estimation strategies used to determine the reasonableness of solutions to real-world problems. • Estimates quantities of objects to 500 or more and justifies and explains the reasoning for the estimates (for example, using compatible numbers, benchmark numbers, unitizing).	• Should require estimation to find the solution and should not lend themselves to the calculation of an exact amount. • Graphics should be used in at least 70% of these items.		compatible numbers, benchmark numbers	Refer to instructional materials for suggested use.

Fourth Grade Mathematics Curriculum Pacing Guiding

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
22	**MA.A.1.2.1** • Reads, writes, and identifies fractions and mixed numbers with denominators including 2, 3, 4, 5, 6, 8, 10, 12, 20, 25, 100, and 1000. • Reads, writes, and identifies decimals through hundredths.	• Assess with MA.A.1.2.4. • Numbers compared may be in the same form or in two different forms. Items comparing fractions with decimals, the denominator of the fraction should represent the same number of places as the decimal and leading zeros used. • Number lines may include whole numbers, proper fractions, mixed numbers, or decimals.		numerator, denominator, fractions, decimals	fraction bars, fractions strips
	MA.A.1.2.4 • Uses concrete materials to model equivalent forms of whole numbers, fractions, and decimals. • Identifies equivalent forms of numbers. • Knows that two numbers in different forms are equivalent or non-equivalent, using whole numbers, decimals, fractions, and mixed numbers.	• Diagrams and models may be used to translate problem situations. • Graphics should be used in at least 50% of these items.		equivalent forms, non-equivalent	fraction bars, fraction strips, fraction circles, linking cubes
	MA.A.1.2.3 • Translates problem situations into diagrams and models using whole numbers, fractions, mixed numbers and decimals to hundredths including money notation.			Refer to instructional materials for suggested vocabulary.	Refer to instructional materials for suggested use.
23	**MA.A.1.2.2** • Uses language and symbols (>, <, =) to compare numbers in the same form and in two different forms, such as _ < 1. • Compares and orders commonly used fractions and decimals to hundredths using concrete materials, drawings, and numerals.	• Number lines may include whole numbers, proper fractions, mixed numbers, or decimals. • Words, number lines, drawings, numerals, or symbols (<, =, >). • Graphics should be used in at least 70% of these items.		compare, order, mixed numbers	Refer to instructional materials for suggested use.

3rd Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
23 (Continued)	**MA.A.1.2.2 (Continued)** • Locates whole numbers, fractions, mixed numbers, and decimals on a number line.				
24	**MA.B.1.2.1** • Knows about varied time intervals, including decades, hours, minutes, and seconds.			time intervals, decades, hours, minutes, seconds	clocks
	MA.B.1.2.2 • Uses schedules, calendars, and elapsed time to solve real-world problems.			elapsed time	clocks, calendars
	MA.B.3.2.1 • Using real-world settings, objects, graph paper, or charts, solves problems involving estimated measurements of time to the nearest five-minute interval.			estimate	rulers, graph paper, scales, balance scale
25	**MA.E.1.2.1** • Interprets and compares information from different types of graphs including graphs from content-area materials and periodicals. • Analyzes and explains orally or in writing the implications of data displays.	• Titles should be worded appropriately for grade level. • Interpret and compare information from charts, pictographs, single and double bar graphs, or single line graphs. • Scale increments should include units 1, 2, 5, or 10 and grid lines should be used. • Data presented should represent five or fewer categories. • Graphics should be used in 100% of these items.		parts of a graph, title, labels, intervals, key, data table pictograph, bar graph, double bar graph, line graph	color tiles, graph paper, cubes color tiles, graph paper, cubes

Fourth Grade Mathematics Curriculum Pacing Guiding

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
25 (Continued)	**MA.D.2.2.2** • Uses physical or pictorial models and graphs (for example, cubes, number lines) to solve equations or inequalities. • Uses information from physical models, graphs, or tables to solve problems.	• Should use only simple equations or inequalities. No compound inequalities should be used. • Simple equations or inequalities may use whole numbers up to 100 or decimal numbers presented as money. • Variables should be represented with geometric shapes or lowercase italicized letters. • Any given equation or expression, a maximum of one variable at a time should be using the symbol "x".		variables, symbols, equation, inequalities, expression	cubes, balance scale
26	**MA.D.2.2.1** • Solves problems involving equations or simple inequalities using manipulatives, diagrams, or models, symbolic expressions, or written phrases. • Uses a variable to represent a given verbal expression (for example, seven times a number is $7n$). • Translates problem-solving situations into expressions and equations using a variable for the unknown.	• Only simple equations or simple inequalities involving whole numbers less than or equal to 100. • Variables used to represent numbers in problem situations should be geometric figures. • Given equation or expression, only one element at a time should be presented. • Multiplication should represent the operation using the symbol "x".		equations, inequalities, symbolic expression, written phrases, variables,	balance scale, cubes, base ten blocks
27	**MA.A.3.2.1** • Explains and demonstrates the addition and subtraction of common fractions using concrete materials, drawings, story problems, and algorithms. • Explains and demonstrates the addition and subtraction of decimals (to hundredths) using concrete materials, drawings, story problems, and algorithms.	• Items will assess the effects of addition and subtraction of fractions, and decimals to hundredths. • Fractions will be limited to denominators of 2, 4, and 10 and decimals of 0.25, 0.50, and 0.75.		remainders, number sentences, story problems, skip counting, doubles, properties	grid paper

3rd Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
27 (Continued)	**MA.A.3.2.2** • Uses problem solving strategies to determine the operation(s) needed to solve 0ne- and two- step problems involving addition and subtraction of decimals and fractions.	• Include addition and subtraction of decimals and fractions (with denominators of 2, 3,4, 5, 8 or 10). • Items will be limited to one- or two- operation problems only. • Answer choices should be expressions or number sentences, not merely operation symbols.		number sentences, operation symbols	
	MA.A.3.2.3 • Solves real-world problems involving the addition or subtraction of decimals (to hundredths) or common fractions with like or unlike denominators. • Explains the reason for choosing a particular computing method for a particular problem. • Solves real-world problems involving addition and subtraction of decimals and fractions using an appropriate method (for example, mental math, pencil and paper, calculator).	• One-step problems only. • Graphics should be used in at least 30% of the items. • include addition and subtraction of decimals and fractions (with denominators of 2,3,4,5,8 or 10) • limit to one or two operations only. • Set in real world context. • Graphics used in some of these items.		like denominators, unlike denominators	Refer to instructional materials for suggested use.
	MA.B.3.2.1 • Using real-world settings, objects, graph paper, or charts, solves problems involving estimated measurements of money to the nearest $1.00 (combination of coin and currency).				

3rd Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
28	**MA.C.3.2.2** • Knows how to identify, locate, and plot ordered pairs of whole numbers on a graph, or on the first quadrant of a coordinate system.	• Coordinate grids should be no larger than 10 x 10 units. • Objects or points on the coordinate grid should be placed on the points of intersection of the grid lines. • Items will assess ordered pairs of whole numbers in the first quadrant of a coordinate grid system. • Graphics should be used in at least 70% of these items.		ordered pairs, grid, coordinate grid	geoboards, dot paper, grid paper
29	**MA.C.3.2.1** • Compares the concepts of area and perimeter using concrete materials (for example, colored tiles, grid paper) and real world situations (for example, carpeting a floor, fencing a yard) • Applies the concepts of area and perimeter to solve real-world and mathematical problems. • Knows how area and perimeter are affected when geometric figures are combined.	• Concepts of area and perimeter of rectangles or composite figures made of rectangles. • Presented either on a grid, using only quadrant one, or in picture form. • Graphics should be used in 100% of these items.		Area, perimeter, dimensions	Color tiles, grid paper, pentominoes
30	**MA.A.5.2.1** • Knows rules of divisibility for 2, 3, 5, 9, and 10.	• Knows rules of divisibility for 2, 3, 5, 9, and 10. • Graphics should be used in at least 30% of these items.		factors, product, rules of divisibility, multiples	hundreds chart

3rd Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
30 (Continued)	**MA.A.3.2.3** • Solves real-world multiplication problems with whole numbers (three digits by one digit) using concrete materials, drawings, pencil and paper. • Solves real-world division problems having divisors of one digit and dividends of three digits, with or without remainders.	• One-step problems only. • Graphics should be used in at least 30% of the items.		like denominators, unlike denominators	Refer to instructional materials for suggested use.

Review all strands in preparation for FCAT testing

4th Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
31	**MA.A.5.2.1** • Knows rules of divisibility for 2, 3, 5, 9, and 10. • Uses models to identify perfect squares to 100.	• Knows rules of divisibility for 2, 3, 5, 9, and 10. • Graphics should be used in at least 30% of these items.		factors, product, rules of divisibility, multiples	hundreds chart
32	**MA.B.2.2.1** • Uses multiplication and division to convert units of measure within either the customary or metric system (for example: 100 cm = 1m). ***Note: customary and metric systems should be taught independently of one another.***	• Items should involve one conversion.		customary, and metric units, convert	measuring tools, scales and balances, thermometers, measuring cups, gauges
33	**MA.B.1.2.1** • Uses a wide variety of models (for example, manipulatives, diagrams) and applies counting procedures to investigate measurements of length, area, volume, and perimeter. • Knows measurement concepts and uses oral and written language to communicate them.			perimeter, area, volume	color tiles, cubes, geometric solids
	MA.B.3.2.1 • Knows how to estimate the volume of rectangular prisms using manipulatives or graphic representation.			rectangular prisms	rectangular prisms, linking cubes

4th Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
34	**MA.D.2.2.1** • Solves problems involving equations or simple inequalities using manipulatives, diagrams, or models, symbolic expressions, or written phrases. • Uses a variable to represent a given verbal expression (for example, seven times a number is 7*n*). • Translates problem-solving situations into expressions and equations using a variable for the unknown.	• Only simple equations or simple inequalities involving whole numbers less than or equal to 100. • Variables used to represent numbers in problem situations should be geometric figures. • Given equation or expression, only one element at a time should be presented. • Multiplication should represent the operation using the symbol "x".		equations, inequalities, symbolic expression, written phrases, variables,	balance scale, cubes, base ten blocks
	MA.D.2.2.2 • Uses physical or pictorial models and graphs (for example, cubes, number lines) to solve equations or inequalities.	• Should use only simple equations or inequalities. No compound inequalities should be used. • Simple equations or inequalities may use whole numbers up to 100 or decimal numbers presented as money. • Variables should be represented with geometric shapes or lowercase italicized letters. • Any given equation or expression, a maximum of one variable at a time should be using the symbol "*x*".		variables, symbols, equation, inequalities, expression	cubes, balance scale
35	**MA.C.2.2.2** • Explores tessellations.			tessellations	geometric shapes

Fourth Grade Mathematics Curriculum Pacing Guiding

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
36	**MA.A.1.2.2** • Uses language and symbols ($>$, $<$, $=$) to compare numbers in the same form and in two different forms, such as _ < 1. • Compares and orders commonly used fractions and decimals to hundredths using concrete materials, drawings, and numerals. • Locates whole numbers, fractions, mixed numbers, and decimals on a number line.	• Number lines may include whole numbers, proper fractions, mixed numbers, or decimals. • Words, number lines, drawings, numerals, or symbols ($<$, $=$, $>$). • Graphics should be used in at least 70% of these items.		compare, order, mixed numbers	Refer to instructional materials for suggested use.
	MA.A.1.2.4 • Knows that two numbers in different forms are equivalent or non-equivalent, using whole numbers, decimals, fractions, and mixed numbers.	• Diagrams and models may be used to translate problem situations. • Graphics should be used in at least 50% of these items.		equivalent forms, non-equivalent	fraction bars, fraction strips, fraction circles, linking cubes
37	**MA.A.3.2.2** • Uses problem solving strategies to determine the operation(s) needed to solve one- and two- step problems involving addition and subtraction of decimals and fractions.	• Include addition and subtraction of decimals and fractions (with denominators of 2, 3, 4, 5, 8 or 10). • Items will be limited to one- or two-operation problems only. • Answer choices should be expressions or number sentences, not merely operation symbols.		number sentences, operation symbols	
	MA.A.3.2.3 • Solves real-world problems involving the addition or subtraction of decimals (to hundredths) or common fractions with like or unlike denominators. • Solves real world problems involving addition and subtraction of decimals and fractions using an appropriate method (for example, mental math, pencil and paper, calculator).	• One-step problems only. • Graphics should be used in at least 30% of the items.		like denominators, unlike denominators	Refer to instructional materials for suggested use.

4th Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
38	**MA.B.1.2.2** • Uses schedules, calendars, and elapsed time to solve real-world problems.			elapsed time	clocks, calendars

	MA.B.1.2.2
	• Solves real-world problems involving measurement of the following:
	  ➢ length (for example, millimeter, quarter-inch, foot, yard, meter)
	  ➢ weight (for example, pounds, ounces, kilograms, grams)
	  ➢ capacity (for example, cup, milliliters)
	
	Note: customary and metric systems should be taught independently of one another.r
		• May include standard units of measurement in inches, feet, yards, or miles; ounces, pounds, or tons; or metric units of measurement in centimeters, meters, kilometers, grams, kilograms,.		miles, kilometers	rulers, meter stick, yard stick, tape measure,

	MA.B.1.2.2 • Solves real-world problems involving perimeter, area, and volume using concrete, graphic or pictorial models.	• Graphic models will be used to assess perimeter area. • Graphics should be used in at least 70% of these items.			
39	**MA.E.1.2.1** • Interprets and completes circle graphs using common fractions.			circle graphs	Refer to instructional materials for suggested use.
	MA.E.1.2.3 • Uses a calculator to determine the range and mean of a set of data • Uses computer application to examine and evaluate data. • Uses computer application to construct graphs.			range, mean, set of data	calculators

4th Nine Weeks   2007-2008

Instructional Blocks	Benchmarks/Grade Level Expectations	Content Limits for Test Items	Page(s) in Textbook	Vocabulary	Manipulatives
39 (Continued)	**MA.E.3.2.2** • Uses statistical data to identify trends. • Applies statistical data to make generalizations. • Justifies and explains generalizations.			statistics, generalization, justification	Refer to instructional materials for suggested use.
40	**MA.A.2.2.2** • Uses concrete materials and symbolic notation to represent numbers in bases other than base ten, such as base five. • Reads, writes, and compares the decimal number system to the Roman numeral system using the Roman numerals I, V, X, L, C, D, and M.			Roman numerals	Refer to instructional materials for suggested use.

The School Board of Miami-Dade County, Florida, adheres to a policy of nondiscrimination in employment and educational programs/activities and programs/activities receiving Federal financial assistance from the Department of Education, and strives affirmatively to provide equal opportunity for all as required by:

Title VI of the Civil Rights Act of 1964 - prohibits discrimination on the basis of race, color, religion, or national origin.
Title VII of the Civil Rights Act of 1964, as amended - prohibits discrimination in employment on the basis of race, color, religion, gender, or national origin.

Title IX of the Education Amendments of 1972 - prohibits discrimination on the basis of gender.
Age Discrimination in Employment Act of 1967 (ADEA), as amended – prohibits discrimination on the basis of age with respect to individuals who are at least 40.

The Equal Pay Act of 1963, as amended - prohibits sex discrimination in payment of wages to women and men performing substantially equal work in the same establishment.

Section 504 of the Rehabilitation Act of 1973 -prohibits discrimination against the disabled.
Americans with Disabilities Act of 1990 (ADA) - prohibits discrimination against individuals with disabilities in employment, public service, public accommodations and telecommunications.

The Family and Medical Leave Act of 1993 (FMLA) - requires covered employers to provide up to 12 weeks of unpaid, job-protected leave to "eligible" employees for certain family and medical reasons.

The Pregnancy Discrimination Act of 1978 - prohibits discrimination in employment on the basis of pregnancy, childbirth, or related medical conditions.

Florida Educational Equity Act (FEEA) - prohibits discrimination on the basis of race, gender, national origin, marital status, or handicap against a student or employee.

Florida Civil Rights Act of 1992 - secures for all individuals within the state freedom from discrimination because of race, color, religion, sex, national origin, age, handicap, or marital status.

School Board Rules 6Gx13- 4A-1.01, 6Gx13- 4A-1.32, and 6Gx13- 5D-1.10 – prohibit harassment and/or discrimination against a student or employee on the basis of gender, race, color, religion, ethnic or national origin, political beliefs, marital status, age, sexual orientation, social and family background, linguistic preference, pregnancy, or disability.

Veterans are provided re-employment rights in accordance with P.L. 93-508 (Federal Law) and Section 295.07 (Florida Statutes), which stipulate categorical preferences for employment.