2003/2010 ACOS MATHEMATICS CONTENT CORRELATION
GRADE 3

2003 ACOS		2010 ACOS
CURRENT ALABAMA CONTENT PLACEMENT		**2010 GRADE 3 CONTENT**
3.1	**Demonstrate number sense by comparing, ordering, and expanding whole numbers through 9999.**	**CONTENT NOW ADDRESSED IN GRADE 2:** **2.5. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: [2-NBT1]** **a. 100 can be thought of as a bundle of ten tens — called a 'hundred.' [2-NBT1a]** **b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones.) [2-NBT1b]**
3.1.B.1	**Comparing numbers using the symbols >, <, =, and ≠**	**CONTENT NOW ADDRESSED IN GRADE 1:** **1.11. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. [1-NBT3]**
3.1.B.2	**Identifying the place value of any digit within a four-digit number**	**CONTENT NOW ADDRESSED IN GRADE 2:** **2.5. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: [2-NBT1]** **a. 100 can be thought of as a bundle of ten tens — called a 'hundred.' [2-NBT1a]** **b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, our, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones.) [2-NBT1b]**
3.1.B.3	**Writing a four-digit number in words and locating it on a number line**	**CONTENT NOW ADDRESSED IN GRADE 2:** **2.7. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. [2-NBT3]**
3.1.B.4	**Determining the value of a number written in expanded notation to the ten- thousands place**	**CONTENT NOW ADDRESSED IN GRADE 2:** **2.7. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. [2-NBT3]**
3.1.B.5	**Rounding whole numbers to the nearest ten and hundred and money values to the nearest dollar**	3.10. Use place value understanding to round whole numbers to the nearest 10 or 100. [3-NBT1]
3.2	**Solve addition and subtraction problems, including word problems, involving two- and three-digit numbers with and without regrouping.**	3.11. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. [3-NBT2]
3.2.B.1	**Estimating sums and differences by using compatible numbers, front-end estimation, and rounding**	**CONTENT NO LONGER ADDRESSED IN GRADE 3**
3.2.B.2	**Demonstrating computational fluency in addition and subtraction**	3.11. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. [3-NBT2]

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3.3	**Multiply whole numbers with and without regrouping using single-digit multipliers.**	3.4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. [3-OA4] 3.7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. [3-OA7] 3.12. Multiply one-digit whole numbers by multiples of 10 in the range 10 - 90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations. [3-NBT3]
3.3.B.1	**Applying concepts of multiplication through the use of manipulatives, number stories, arrays, repeated addition, or problem situations**	3.1. Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. [3-OA1] 3.3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem (See Appendix A, Table 2.) [3-OA3] 3.6. Understand division as an unknown-factor problem. [3-OA6] 3.22. Relate area to the operations multiplication and addition. [3-MD7]
3.3.B.2	**Applying basic multiplication facts through 9 x 9 by using manipulatives, solving problems, and writing number stories**	3.3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem (See Appendix A, Table 2.) [3-OA3]
3.3.B.3	**Recognizing properties of multiplication**	3.5. Apply properties of operations as strategies to multiply and divide. (Students need not use formal terms for these properties.) [3-OA5] 3.7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. [3-OA7]
3.4	**Divide whole numbers using two-digit dividends and one-digit divisors.**	3.4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. [3-OA4] 3.7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. [3-OA7]
3.4.B.1	**Recognizing division as repeated subtraction**	3.2. Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. [3-OA2]

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3.5	**Model equivalent fractions with concrete objects or pictorial representations.**	3.13. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts and size 1/b. [3-NF1] 3.15. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. [3-NF3] 3.15a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. [3-NF3a] 3.15b. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3.) Explain why the fractions are equivalent, e.g., by using a visual fraction model. [3-NF3b] 3.15c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. [3-NF3c] 3.15d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model. [3-NF3d] 3.25. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. [3-G2]
3.6	**Use coins to make change up to $1.00.**	**CONTENT NOW ADDRESSED IN GRADE 2:** **2.21. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.[2-MD8]**
3.6.B.1	**Determining monetary values of sets of unlike coins and bills up to $5.00**	**CONTENT NOW ADDRESSED IN GRADE 2:** **2.21. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.[2-MD8]**
3.7	**Complete a given numeric or geometric pattern.**	3.9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. [3-OA9]
3.8	**Identify geometric representations for points, lines, perpendicular lines, parallel lines, angles, and rays.**	**CONTENT NOW ADDRESSED IN GRADE 4:** **4.26. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. [4-G1]**
3.8.B.1	**Recognizing real-life examples of points, lines, perpendicular lines, and parallel lines**	**CONTENT NO LONGER ADDRESSED IN GRADE 3**
3.8.B.2	**Drawing points, lines, and perpendicular lines**	**CONTENT NOW ADDRESSED IN GRADE 4:** **4.26. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. [4-G1]**
3.9	**Specify locations on a coordinate grid by using horizontal and vertical movements.**	**CONTENT NOW ADDRESSED IN GRADE 5:** **4.23. Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., *x*-axis and *x*-coordinate, *y*-axis and *y*-coordinate). [5-G1]**
3.10	**Measure length in metric units.**	3.19. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units – whole numbers, halves, or quarters. [3-MD4]

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3.11	**Determine elapsed time to the day with calendars and to the hour with a clock.**	3.16. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. [3-MD1]
3.11.B.1	**Calculating elapsed time to the minute within the same hour**	3.16. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. [3-MD1]
3.11.B.2	**Applying vocabulary associated with time using *a.m., p.m., noon,* or *midnight***	**CONTENT NO LONGER ADDRESSED IN GRADE 3**
3.12	**Recognize data as either categorical or numerical.**	**CONTENT NO LONGER ADDRESSED IN GRADE 3**
3.12.B.1	**Comparing related data sets**	**CONTENT NO LONGER ADDRESSED IN GRADE 3**
3.13	**Determine the likelihood of different outcomes in a simple experiment.**	**CONTENT NO LONGER ADDRESSED IN GRADE 3**
CONTENT MOVED TO GRADE 3 IN 2010 ACOS		
4.3.B.1	**Using a number line to simplify, compare, and order fractions and mixed numbers**	3.14. Understand a fraction as a number on the number line; represent fractions on a number line diagram. [3-NF2]
4.14.B.1 **4.14.B.2**	**Estimating perimeter and area of irregular shapes using unit squares and grid paper** **Estimating area using unit squares**	3.20. Recognize area as an attribute of plane figures and understand concepts of area measurement. [3-MD5] a. A square with side length 1 unit called 'a unit square,' is said to have 'one square unit' of area, and can be used to measure area. [3-MD5a] b. A plane figure which can be covered without gaps or overlaps by n unit squares is saidto have an area of n square units. [3-MD5b] 3.21. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units). [3-MD6] 3.22a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths. [3-MD7a]
4.15 **4.17**	**Represent categorical data using tables and graphs, including bar graphs, line graphs, and line plots.** **Represent numerical data using tables and graphs, including bar graphs and line graphs.**	3.18. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step 'how many more' and 'how many less' problems using information presented in scaled bar graphs. [MD3]
5.2	**Solve problems involving basic operations on whole numbers, including addition and subtraction of seven-digit numbers, multiplication with two- digit multipliers, and division with two-digit divisors.**	3.8. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).) [3-OA8]
5.12	**Calculate the perimeter of rectangles from measured dimensions.**	3.23. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters. [3-MD1]
6.1.B.9	**Applying the distributive property to compute with fractions and decimals**	3.22c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a x b and a x c. Use area models to represent the distributive property in mathematical reasoning. [3-MD7c]

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6.4.B.1	**Classifying quadrilaterals based on their attributes**	3.24. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. [3-G1]
6.7	**Solve problems involving perimeter and area of parallelograms and rectangles.**	3.22b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. [3-MD7b]
	NEW GRADE 3 CONTENT IN 2010 ACOS	
		3.14a. Represent a fraction 1/b on a number line diagram by defining the interval from 0 to 1 as The whole and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line. [3-NF2a]
		3.14b. Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. [3-NF2b]
		3.17. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). (Excludes compound units such as cm3 and finding the geometric volume of a container.) Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (Excludes multiplicative comparison problems (problems involving notions of 'times as much'; see Appendix A, Table 2). [3-MD2]
		3.22d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems. [3-MD7d]