COMPONENT	OBJECTIVES	COMPETENCY
I Number Sense, Concepts, and Operations	1. Reads and writes numerals to 1000 or more. **(MA.A.1.1.1)** 2. Reads and writes number words to "one hundred" or more. **(MA.A.1.1.1)** 3. Understands and uses ordinal numbers 1st - 100^{th} or more. **(MA.A.1.1.1)** 4. Compares and orders whole numbers to 1000 or more using concrete materials, drawings, number lines, and symbols (<, =, >) **(MA.A.1.1.2)** 5. Compares two or more numbers, to 1000 or more, and identifies which number is more than, equal to, or less than the other number. **(MA.A.1.1.2)** 6. Uses numbers and pictures to describe how many objects are in a set to 1000 or more. **(MA.A.1.1.2)** 7. Determines relative size, order, and position for numbers and their real-world applications less than 1000 using a variety of experiences including manipulatives, counting, and number lines. **(MA.A.1.1.3)** 8. Represents, compares, and explains halves, thirds, quarters, and eighths as part of a whole and part of a set, using concrete materials and drawings. **(MA.A.1.1.3)** 9. Uses concrete materials to compare fractions in real-life situations. **(MA.A.1.1.3)** 10. Represents equivalent forms of the same number up to 100 through the use of concrete materials (including coins) diagrams and numbers expressions. **(MA.A.1.1.4)**	A. The student understands the different ways numbers are represented and used in the real world.

COMPONENT	OBJECTIVES	COMPETENCY
	11. Counts by 2s, 3s, 5s, 10s, 25s, 50s, and 100s to 1000 or more using a variety of ways such as mental mathematics, paper and pencil, hundred chart, calculator, and coins in various increments. **(MA.A.2.1.1)** 12. Demonstrates the place value groupings of numbers to 1000 or more using concrete materials, pictures, and symbols. **(MA.A.2.1.1)** 13. Counts by tens from any given number less than 1000. **(MA.A.2.1.1)** 14. Counts forward and backward by ones starting with any 3-digit number to 1000 or more. **(MA.A.2.1.1)** 15. Counts coins using "mixed" counting. **(MA.A.2.1.1)** 16. Counts and groups objects into hundreds, tens, and ones, and relates the groupings to the corresponding written numeral (for example, 4 groups of 100, 2 groups of ten, and 6 ones is 426). **(MA.A.2.1.2)** 17. Knows place value patterns using zero as a place holder (for example, trading 10 tens for 100). **(MA.A.2.1.2)** 18. Knows the place value of a designated digit in whole numbers to 1000. **(MA.A.2.1.2)**	B The student understands number systems.
	19. Describes the relationship between addition and multiplication using pictures and manipulatives. **(MA.A.3.1.1)** 20. Describes the relationship between subtraction and division using pictures and manipulatives. **(MA.A.3.1.1)**	C. The student understands the effects of operations on numbers and the relationships among these operations, selects appropriate operations, and computes for problem solving.

COMPONENT	OBJECTIVES	COMPETENCY
	21. Adds and subtracts two-digit numbers with or without regrouping using models, concrete materials, and algorithms. **(MA.A.3.1.1)** 22. Uses a variety of techniques, including mental arithmetic and calculators, to find sums, differences, products and quotients. **(MA.A.3.1.1)** 23. Recalls (from memory) the addition facts and corresponding subtraction facts ≤ 18. **(MA.A.3.1.1)** 24. Predicts the relative size of solutions in addition and subtraction (for example, adding two whole numbers results in a number that is larger than either of the two original numbers). **(MA.A.3.1.1)** 25. Demonstrates knowledge of multiplication (for the repeated addition, set, array, and area models) using manipulatives, drawings, and story problems. **(MA.A.3.1.1)** 26. Demonstrates knowledge of division (for the repeated subtraction and partitive models) using manipulatives, drawings, and story problems. **(MA.A.3.1.1)** 27. Solves problems involving addition and subtraction using a variety of strategies and explains the solution strategy. **(MA.A.3.1.2)** 28. Writes and solves number problems with one operation involving addition or subtraction. **(MA.A.3.1.2)** 29. Writes number sentences associated with addition and subtraction situations. **(MA.A.3.1.2)**	

COMPONENT	OBJECTIVES	COMPETENCY
	30. Creates and acts out (using objects) number stories representing multiplication and division situations. **(MA.A.3.1.2)** 31. Knows appropriate methods to solve real world problems involving addition and subtraction. **(MA.A.3.1.3)** 32. Chooses and explains the computing method that is more appropriate (that is faster, more accurate, easier) for varied real-world tasks. **(MA.A.3.1.3)** 33. Solves real-life problems which involve addition and subtraction with regrouping, using a variety of techniques, such as manipulatives, money, calculators, pictures and language experiences. **(MA.A.3.1.3)** 34. Makes predictions of quantities of objects (to 50 or more) and explains the reasoning supporting that prediction **(MA.A.4.1.1)** 35. Estimates reasonable solutions for addition and subtraction problems (sums to 100) and explains the procedure used. **(MA.A.4.1.1)** 36. Knows the difference between reasonable and unreasonable estimates. **(MA.A.4.1.1)** 37. Estimates relative sizes and amounts using manipulatives, pictures, and the number line. **(MA.A.4.1.1)** 38. Estimates solutions to and solves problems involving combinations of addition and subtraction. **(MA.A.4.1.1)** 39. Uses place value strategies to estimate sums and differences. **(MA.A.4.1.1)**	D. The student uses estimation in problem solving and computation.

COMPONENT	OBJECTIVES	COMPETENCY
	40. Rounds whole numbers to the nearest ten. **(MA.A.4.1.1)**	
	41. Classifies a number as odd or even using manipulatives to justify the reasoning. **(MA.A.5.1.1)**	E. The student understands and applies theories related to numbers.
	42. Uses concrete models and/ or diagrams to determine multiples and factors of whole numbers with products up to 45. **(MA.A.5.1.1)**	
II Measurement	1. Communicates measurement concepts using oral and written language. **(MA.B.1.1.1)**	A. The student measures quantities in the real world and uses the measures to solve problems.
	2. Demonstrates an understanding of metric and customary measurements including: · length/distance (inches, feet, yards, centimeters, meters) · weight (ounces, pounds, grams and kilograms) · time (hour, half-hour, quarter-hour, 5 minute intervals using analog and digital) · temperature (Fahrenheit and Celsius) **(MA.B.1.1.1)**	
	3. Demonstrates understanding of capacity by selecting appropriate units of measurement. **(MA.B.1.1.1)**	
	4. Measures length, weight, temperature, capacity using standard and nonstandard units: inches, centimeters, pounds, kilograms, grams, degrees Celsius, Fahrenheit, cubes, marbles, wooden blocks, etc. **(MA.B.1.1.2)**	

COMPONENT	OBJECTIVES	COMPETENCY
	5. Uses non-standard and indirect methods to compare and order objects according to their length and weight. **(MA.B.2.1.1)** 6. Uses customary and metric units to measure, order, and compare lengths and weights of objects. **(MA.B.2.1.1)** 7. Knows that a standard unit is used in real-world situations to describe the measures of an object, length, weight, time, and capacity. **(MA.B.2.1.2)**	B. The student compares, contrasts, and converts within systems of measurement (both standard/nonstandard and metric/ customary).
	8. Estimates, measures and compares distance. **(MA.B.3.1.1)** 9. Estimates and measures passage of time using minutes, half-hour, and hours. **(MA.B.3.1.1)** 10. Solves problems dealing with elapsed time to the nearest five minutes. **(MA.B.3.1.1)** 11. Knows and compares money in coins, to one dollar or more. **(MA.B.3.1.1)**	C. The student estimates measurements in real-world problem situations.
	12. Measures length, weight, time, capacity, and distance using objects in the classroom as units of reference. **(MA.B.4.1.1)** 13. Knows appropriate standard tools for measuring linear dimensions, weight, capacity, and temperature. **(MA.B.4.1.2)** 14. Knows appropriate tools (clocks and calendars) for measuring time (including days, weeks, months, and years). **(MA.B.4.1.2)**	D. The student selects and uses appropriate units and instruments for measurement to achieve the degree of precision and accuracy required in real-world situations.

COMPONENT	OBJECTIVES	COMPETENCY
III Geometry and Spatial Sense	1. Describes attributes of two-dimensional and three-dimensional shapes using mathematical language. **(MA.C.1.1.1)** 2. Sorts two and three-dimensional figures according to their attributes. **(MA.C.1.1.1)** 3. Recognizes and names both two and three-dimensional figures presented in various orientations and in the environment. **(MA.C.1.1.1)**	A. The student describes, draws, identifies, and analyzes two- and three-dimensional shapes.
	4. Describes symmetry in two-dimensional shapes. **(MA.C.2.1.1)** 5. Determines line of symmetry of two-dimensional shapes by using concrete materials. **(MA.C.2.1.1)** 6. Identifies congruent shapes. **(MA.C.2.1.1)** 7. Identifies shapes that can be combined or separated. **(MA.C.2.1.1)** 8. Predicts the reflection of a given two-dimensional shape. **(MA.C.2.1.1)** 9. Uses manipulatives to perform geometric transformations: flip/reflection, turn/ rotation, and slide/translation. **(MA.C.2.1.2)**	B. The student visualizes and illustrates ways in which shapes can be combined, subdivided, and changed.

COMPONENT	OBJECTIVES	COMPETENCY
	10. Compares and contrasts two-dimensional and three-dimensional real-life objects. **(MA.C.3.1.1)** 11. Knows how two shapes or two solids are alike and different. **(MA.C.3.1.1)** 12. Describes and classifies two-dimensional and three-dimensional geometric objects according to number of bases, faces, edges, and vertices. **(MA.C.3.1.1)** 13. Locates and explains known and unknown numbers on a number line from 0 – 1000 or more. **(MA.C.3.1.2)** 14. Locates and identifies the coordinate points of objects on a coordinate grid (first quadrant). **(MA.C.3.1.2)**	C. The student uses coordinate geometry to locate objects in both two- and three-dimensions and to describe objects algebraically.
IV Algebraic Thinking	1. Recognizes that a pattern results from repeating an operation, using a transformation, or making some other change to an attribute. **(MA.D.1.1.1)** 2. Describes a given pattern and explains the pattern rule. **(MA.D.1.1.1)** 3. Identifies number patterns with the help of a hundreds chart. **(MA.D.1.1.1)** 4. Creates, extends and predicts patterns that are concrete, pictorial or numerical. **(MA.D.1.1.2)** 5. Combines two attributes to create a pattern (for example, size and color). **(MA.D.1.1.2)**	A. The student describes, analyzes, and generalizes a wide variety of patterns, relations and functions.

COMPONENT	OBJECTIVES	COMPETENCY
	6. Transfers patterns from one medium to another (for example, pictorial to symbolic). **(MA.D.1.1.2)** 7. Uses a calculator to explore and solve number patterns. **(MA.D.1.1.2)** 8. Identifies patterns in the real world (for example, repeating, rotational, tessellating, and patchwork). **(MA.D.1.1.2)** 9. Identifies and generates patterns in a list of related number pairs based on real-life situations. **(MA.D.1.1.2)** 10. Explains generalizations of patterns and relationships. **(MA.D.1.1.2)** 11. Solves a variety of number sentences where the missing number is represented by a geometric shape (for example, 5 + ‘ = 9). **(MA.D.2.1.1)** 12. Solves a variety of number sentences using equality and inequality symbols (>, =, <). **(MA.D.2.1.1)** 13. Uses concrete objects, paper and pencil, or mental mathematics to solve real-world equations with one unknown. **(MA.D.2.1.2)**	B. The student uses expressions, equations, inequalities, graphs and formulas to solve problems.

COMPONENT	OBJECTIVES	COMPETENCY
V Data Analysis and Probability	1. Poses simple questions, gather information to answer questions with two or more choices. **(MA.E.1.1.1)** 2. Records data using pictures, concrete materials, or tally marks. **(MA.E.1.1.1)** 3. Organizes and records information into a simple pictograph, concrete graph, or chart. **(MA.E.1.1.1)** 4. Uses mathematical language to read and interpret data on a simple concrete graph, pictorial graph, or chart. **(MA.E.1.1.1)** 5. Labels different parts of a graph (title, labels, intervals, and key). **(MA.E.1.1.1)** 6. Uses concrete materials, pictures, or graphs to display data and identify range, mode, and median. **(MA.E.1.1.2)** 7. Predicts the outcome for a larger population by analyzing data from a smaller group. **(MA.E.1.1.3)** 8. Uses a calculator to compare data. **(MA.E.1.1.3)** 9. Constructs a graph using computer software. **(MA.E.1.1.3)**	A. The student understands and uses the tools of data analysis for managing information.

COMPONENT	OBJECTIVES	COMPETENCY
	10. Knows the likelihood of a given situation (for example, coin toss, spinners, baseball game). **(MA.E.2.1.1)** 11. Identifies whether an event is certain, probable, or impossible. **(MA.E.2.1.1)** 12. Records results of activities involving chance and makes predictions based upon data. **(MA.E.2.1.1)** 13. Determines if a given event is equally likely, less likely or more likely to occur (for example, spinners, coin toss, election results). **(MA.E.2.1.2)**	B. The student identifies patterns and makes predictions from an orderly display of data using concepts of probability and statistics.
	14. Poses appropriate questions for a class survey. **(MA.E.3.1.1)** 15. Collects data for two or more categories and creates a line graph, pictograph, or chart to display results. **(MA.E.3.1.1)** 16. Analyzes and explains orally or in writing the results from a survey. **(MA.E.3.1.1)** 17. Determines questions for a survey with two, three, or more categories so that the collected information will be relevant to the questions. **(MA.E.3.1.2)** 18. Knows appropriate methods to display and interpret information. **(MA.E.3.1.2)**	C. The student uses statistical methods to make inferences and valid arguments about real-world situations.