<u>Standard 1</u>: Number and Operation

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|--|--|--|---|--|--|--|--|---|---|--|--|
| Goal 1.1: Understand and use numbers. | K.M.1.1.1A Recognize symbolic expressions as numbers | 1.M.1.1.1A Indicate recognition of various #'s in environments | 2.M.1.1.1A Demonstrate knowledge of the numeration system by counting forward by 1's | | | | | | | | |
| | K.M.1.1.2A Demonstrate 1:1 correspondence | 1.M.1.1.2A Communicate and demonstrate physical representations for numbers up to 5. | 2.M.1.1.2A Communicate and demonstrate whole numbers in order up to 10 | 3.M.1.1.1 A Identify whole numbers in order up to 30, using a number line when necessary | 4.M.1.1.1A Communicate and demonstrate whole numbers in order up to 50, using a number line or chart when necessary. | 5.M.1.1.1 A Communicate and demonstrate whole numbers to 100 and decimal numbers to hundredths. | 6.M.1.1.1A Recognize the magnitude of difference between small and large whole numbers. | 7.M.1.1.1A Recognize the magnitude of difference between small and large whole numbers and decimals. | 8.M.1.1.1 A Recognize the magnitude of difference between small and large fractions. | 9.M.1.1.1A Recognize the magnitude of difference between small and large percents. | 10.M.1.1.1 A Compare magnitudes and relative magnitudes of whole numbers, decimals, fractions, and percents. |
| | | 1.M.1.1.3A Show the symbolic representation of the ones place value. | 2.M.1.1.3A Show the symbolic representation of the tens place value. | 3.M.1.1.2A Identify place value of numbers through 30 | 4.M.1.1.2 A Identify place value of numbers through 50. | 5.M.1.1.2A Identify place value for whole numbers to 100 and decimal numbers to hundredths. | 6.M.1.1.2 A Recognize corresponding common fractions and decimals | 7.M.1.1.2A Recognize corresponding common fractions and percents. | 8.M.1.1.2 A Identify the parts of a ratio in real world situations | 9.M.1.1.2 A Use positive and negative numbers, fractions, decimals, percentages, and ratios in real world situations. | 10.M.1.1.2A Use positive and negative numbers, fractions, decimals, percentages, and ratios in real world situations. |
| | K.M.1.1.3A Identify coins as money | 1.M.1.1.4A Sort coins by identity. | 2.M.1.1.4 A Identify and demonstrate the value of pennies and nickels | 3.M.1.1.3 A Sort coins and one bills by identity and value. | 4.M.1.1.3 A Count the value of a collection of pennies nickels and dimes up do \$1.00 | 5.M.1.1.3A Sort dollar denominations and use whole dollar estimation up to \$10.00 | | | | | |
| | | | | 3.M.1.1.4 A Recognize commonly used fractions using concrete materials. | 4.M.1.1.4A Communicate and demonstrate commonly used fractions with symbolic representations. | 5.M.1.1.4A Compare commonly used fractions with symbolic representations | | | | | |
| | | | | | | | 6.M.1.1.3A Create a number line with positive numbers. | 7.M.1.1.3A Create a number line with positive rational numbers. | 8.M.1.1.3 A Identify position of positive rational numbers on a number line. | | |
| | | | | | 4.M.1.1.5A The student will recognize the value of common coins and the dollar. | 5.M.1.1.5A Match simple, equivalent units of measurement in the U.S. Customary system. | 6.M.1.1.4A Match basic equivalent decimals and fractions, ie .25 = 1/4 | 7.M.1.1.4A Recognize exponents as a representation of a very large number. | 8.M.1.1.4A Recognize exponents as a representation of a very large number. | 9.M.1.1.3 A Recognize exponents as a representation of a very large number. | 10.M.1.1.3A Recognize exponents as a representation of a very large number. |
| | | | | | | | | | | 9.M.1.1.4A | 10.M.1.1.4A |

<u>Standard 1</u>: Number and Operation (continued)

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|---|---|--|---|--|--|--|--|--|---|--|--|
| Goal 1.1: Understand and use numbers. (continued from previous page) | | | | | | 5.M.1.1.6 A Use repeated addition to demonstrate prime numbers in multiplication. | 6.M.1.1.5 A Use repeated addition to demonstrate prime numbers or factorization in multiplication. | 7.M.1.1.5 A Use repeated addition models to match the Least Common Multiple (LCM) and the Greatest Common Factor (GCF). | 8.M.1.1.5 A Use repeated addition models to demonstrate primes, composites, prime factorization, LCM, or GCF. | 9.M.1.1.5 A Solve problems using repeated addition in multiplication with prime numbers, factors and multiples. | 10.M.1.1.5A Solve problems using repeated addition in multiplication with prime numbers, factors and multiples. |
| | K.M.1.1.4A Identify a problem that can be solved. | 1.M.1.1.5 Given options, match the appropriate solution to solve a problem. | 2.M.1.1.5 A Demonstrate the ability to solve simple problems. | 3.M.1.1.5 A Recognize and demonstrate the appropriate problem solving strategy to solve problems. | 4.M.1.1.6A Choose appropriate application to solve a problem. | 5.M.1.1.7A Choose appropriate application to solve a problem. | 6.M.1.1.6 A Recognize and demonstrate the appropriate problem solving strategy to solve a multi-step problem. | 7.M.1.1.6A Identify pertinent information needed to solve a one-step problem. | 8.M.1.1.6 A Identify pertinent information needed to solve a multi-step problem. | | |
| | | | | | | | 6.M.1.1.7 A Identify positive and negative numbers in real-world situations. | 7.M.1.1.7 A Identify positive and negative numbers in real-world situations | 8.M.1.1.7 A Identify positive and negative numbers in real-world situations | | |
| | K.M.1.1.5A Attend to appropriate math vocabulary terms, i.e. more, less, next, first. | 1.M.1.1.6A Attend to appropriate math vocabulary terms. | 2.M.1.1.6A Attend to appropriate math vocabulary terms. | 3.M.1.1.6 A Recognize appropriate math vocabulary terms. | 4.M.1.1.7A Recognize appropriate vocabulary. | 5.M.1.1.8 A Recognize appropriate vocabulary. | 6.M.1.1.8 A Use appropriate vocabulary. | 7.M.1.1.8 A Use appropriate vocabulary. | 8.M.1.1.8 A Use appropriate vocabulary. | 9.M.1.1.6 A Use appropriate vocabulary. | 10.M.1.1.6A Use appropriate vocabulary. |
| Goal 1.2: Perform computations accurately. | K.M.1.2.1A Demonstrate knowledge of the concept more or less | 1.M.1.2.1 A Use objects, pictures, or symbolic systems to explore addition or subtraction | 2.M.1.2.1A Use objects, pictures, or symbolic systems to explore addition or subtraction problems to 10 | 3.M.1.2.1 A Use objects, pictures, or symbolic systems to solve addition or subtraction problems to 18 | 4.M.1.2.1A Explore single digit multiplication for 1's – 5's through symbolic concrete systems | 5.M.1.2.1A Explore single digit multiplication for 1's – 10's through symbolic concrete systems | 6.M.1.2.1A Introduce the use of a multiplication chart to solve multiplication and division problems. | 7.M.1.2.1 A Match common equivalent fractions, decimals, and percents i.e. half (1/2, .50 or 50%) | 8.M.1.2.1A Match common equivalent fractions, decimals, and percents i.e. halves, fourths, and tenths. | | |
| | | 1.M.1.2.2 A Count two groups of objects, pictures or symbolic system to identify total quantity up to five. | 2.M.1.2.2 A Count two groups of objects, pictures or symbolic system to identify total quantity up to ten. | 3.M.1.2.2 A Explore adding and subtracting with regrouping using manipulatives. | 4.M.1.2.2 A Add and subtract whole numbers, with or without the use of manipulatives. | 5.M.1.2.2 A Identify numbers with decimals have a part of a whole, e.g. money using coins and dollars | 6.M.1.2.2 A Add, subtract, multiple, or divide single digit whole numbers or simple decimals, with or without the use of a calculator or manipulatives. | 7.M.1.2.2 A Add, subtract, multiple or divide single digit whole numbers or positive integers, with or without the use of a calculator or manipulatives. | 8.M.1.2.2 A Add, subtract, multiple, and divide rational numbers, with or without the use of a calculator or manipulatives. | | |
| | | | 2.M.1.2.3A Count three groups of objects, pictures or symbolic system to identify total quantity up to five. | 3.M.1.2.3A Count three groups of objects, pictures or symbolic system to identify total quantity up to ten. | | | | | | | |
| | | 1.M.1.2.3A Recognize the concept of subtraction (less) using concrete objects, pictures, or symbols. | 2.M.1.2.4 A Use manipulatives for adding/subtracting. | 3.M.1.2.4 A Explore multiplication through the manipulation of adding repeated sets | 4.M.1.2.3 A Explore multiplication through the manipulation of adding repeated sets and division by separating sets into equal parts | 5.M.1.2.3 A Explore division through the manipulation of dividing a whole into repeated equal sets | | 7.M.1.2.3 A Recognize models of multiples as exponents, i.e. using concrete objects, pictures or student preferred items, use a tray to count multiples of equal groups. | 8.M.1.2.3A Recognize models of multiples as exponents, i.e. using concrete objects, pictures or student preferred items, use a tray to count multiples of equal groups. | | |
| | | | | | 4.M.1.2.4 A Identify that "a whole" can be divided to create "smaller pieces" and the pieces can be added to create a whole again. | 5.M.1.2.4 A Recognize common small pieces or fractions to fourths can be subtracted from the whole. | | | | | |

<u>Standard 1</u>: Number and Operation (continued)

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|---|--|--|--|---|---|--|--|--|--|---|--|
| Goal 1.2: Perform computations accurately. (continued from previous page) | | | | | 4.M.1.2.5 A Demonstrate knowledge to add a collection of dollars using the decimal point symbol | | | | | | |
| | | | | | | 5.M.1.2.5A Solve single addition and subtraction problems that include parentheses, using calculator or manipulatives if necessary. | 6.M.1.2.3 A Solve single digit addition and subtraction problems using an order of operations, with or without calculators or manipulatives | 7.M.1.2.4 A Solve single digit addition, subtraction and multiplication problems that include parentheses, using calculator or manipulatives if necessary. | 8.M.1.2.4A Solve single digit addition, subtraction and multiplication problems using an order of operations, with or without calculator or manipulatives. | 9.M.1.2.1 A Solve single digit addition, subtraction and multiplication problems with rational numbers, using an order of operations, with or without calculator or manipulatives. | 10.M.1.2.1 A Solve single digit addition, subtraction and multiplication problems with rational numbers, using an order of operations, with or without calculator or manipulatives. |
| | | | | 3.M.1.2.5 A Use concrete objects or symbolic systems to solve addition and subtractions problems | 4.M.1.2.6 A Use concrete objects or symbolic systems to solve addition and subtractions problems | 5.M.1.2.6A Use concrete objects, symbolic systems or calculator to solve addition or subtractions problems | 6.M.1.2.4 A Use concrete objects, symbolic systems or calculator to solve addition or subtractions problems | 7.M.1.2.5 A Use concrete objects, symbolic systems or calculator to solve addition or subtractions problems | 8.M.1.2.5 A Use concrete objects, symbolic systems or calculator to solve addition or subtractions problems | | |
| | | | | 3.M.1.2.6 A Select appropriate operations to solve one step addition or subtraction word or symbolic problems. | 4.M.1.2.7A Select appropriate operations to solve one step addition or subtraction word or symbolic problems | 5.M.1.2.7A Use a variety of strategies to solve real life problems. | 6.M.1.2.5A Use a variety of strategies to solve real life problems. | 7.M.1.2.6 A Use a variety of strategies to solve real life problems. | 8.M.1.2.6 A Use a variety of strategies to solve real life problems. | | |
| | K.M.1.2.2A Attend to appropriate math vocabulary terms | 1.M.1.2.4A Attend to appropriate math vocabulary terms | 2.M.1.2.5 A Attend to appropriate math vocabulary terms | 3.M.1.2.7 A Recognize appropriate math vocabulary terms | 4.M.1.2.8A Recognize appropriate vocabulary. | 5.M.1.2.8 A Recognize appropriate vocabulary. | 6.M.1.2.6 A Use appropriate vocabulary. | 7.M.1.2.7 A Use appropriate vocabulary. | 8.M.1.2.7A Use appropriate vocabulary. | | |
| Goal 1.3: Estimate and judge reasonableness of results. | K.M.1.3.1 A Match objects of corresponding size | 1.M.1.3.1 A Identifying objects of corresponding size | 2.M.1.3.A Estimate a quantity of objects when shown a set of 10. | 3.M.1.3.1A Estimate to predict sums and differences. | 4.M.1.3.1A Estimate to predict sums and differences | 5.M.1.3.1A Estimate to predict results or amounts. | 6.M.1.3.1A Estimate to predict results or amounts. | 7.M.1.3.1A Use estimation to select a reasonable answer to a real world problem involving whole numbers. | 8.M.1.3.1A Use estimation to select a reasonable answer to a real world problem involving whole numbers. | | |
| | K.M.1.3.2 A Attend to quantity or size of objects during estimation activities. | 1.M.1.3.2 A Attend to quantity or size of objects during estimation activities. | 2.M.1.3.2 A Use estimation skills or determine reasonableness across daily activities. | 3.M.1.3.2 A Use estimation to evaluate reasonableness of a sum. | 4.M.1.3. A Use estimation skills across daily activities. | 5.M.1.3.2A Identify daily activities where estimation is appropriate. | 6.M.1.3.2 A Identify daily activities where estimation is appropriate. | 7.M.1.3.2 A Identify daily activities where estimation is appropriate. | 8.M.1.3.2 A Identify daily activities where estimation is appropriate. | 9.M.1.3.1 A Identify daily activities where estimation is appropriate. | 10.M.1.3.1 A Identify daily activities where estimation is appropriate. |
| | | | | | | 5.M.1.3.3.A Determine over and under estimations in daily living activities. | 6.M.1.3.3 A Determine over and under estimations in daily living activities. | 7.M.1.3.3 A Explore over and under estimation through daily living activities. | 8.M.1.3.3 A Explore over and under estimation through daily living activities. | 9.M.1.3.2 A Explore over and under estimation through daily living activities. | 10.M.1.3.2 A Explore over and under estimation through daily living activities. |
| | | | | 3.M.1.3.3A Investigate the use of a calculator to solve simple problems. | 4.M.1.3.3A Investigate the use of a calculator to solve problems | 5.M.1.3.4 A Use a calculator to solve problems. | 6.M.1.3.4A Use a calculator to solve problems. | 7.M.1.3.4 A Use assistive technology to solve problems | 8.M.1.3.4A Use assistive technology to solve problems | | |

<u>Standard 1</u>: Number and Operation (continued)

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|---|---|---|--|--|---|--|---|--|---|---------|----------|
| Goal 1.3: Estimate and judge reasonableness of results. (continued from previous page) | | | | | | 5.M.1.3.5 A Formulate a guess to a problem. | 6.M.1.3.5 A Formulate a guess to a problem. | 7.M.1.3.5 A Formulate a guess to a problem and then show why it seems to be true. | 8.M.1.3.5A Formulate a guess to a problem and then show why it seems to be true. | | |
| | K.M.1.3.3 A Attend to appropriate vocabulary. | 1.M.1.3.3 A Attend to appropriate vocabulary. | 2.M.1.3.3A Attend to appropriate vocabulary. | 3.M.1.3.4A Recognize appropriate vocabulary. | 4.M.1.3.4 A Recognize appropriate vocabulary. | 5.M.1.3.6A Recognize appropriate vocabulary. | 6.M.1.3.6 A Use appropriate vocabulary. | 7.M.1.3.6A Use appropriate vocabulary. | 8.M.1.3.6 A Use appropriate vocabulary. | | |

<u>Standard 2</u>: Concepts and Principles of Measurement

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|---|--|--|--|--|--|--|---|--|--|--|---|
| Goal 2.1: Understand and use U.S. customary and metric measurements. | K.M.2.1.1A Match sizes of objects (e.g., longer, shorter, larger, smaller). | 1.M.2.1.1 A Match sizes of objects given an attribute (e.g., longer, shorter, larger, smaller). | 2.M.2.1.1 A Compare objects given and attribute, eg. lengths sizes, weight, time | 3.M.2.1.1 A Use appropriate tools or non-standard units to measure length or temperature | 4.M.2.1.1A Identify the standard tools to make formal measurements of length, time, temperature, and weight. | 5.M.2.1.1A Select the appropriate units and tools to make formal measurements of length, temperature, weight. | 6.M.2.1.1A Select and use appropriate units and tools to make formal measurements. | 7.M.2.1.1A Select and use appropriate units and tools to make formal measurements. | 8.M.2.1.1A Select and use appropriate units and tools to make formal measurements. | | |
| | K.M.2.1.2A Estimate an attribute of an object. | 1.M.2.1.2A Estimate an attribute of an object using non- standard units, i.e. as big as, same size as | 2.M.2.1.2A Estimate time using non-standard or standard units. | 3.M.2.1.2 A Estimate time and weight using non- standard or standard units in real world problems. | 4.M.2.1.2 A Estimate length, time, weight, and temperature in real- world problems. | 5.M.2.1.2A Estimate length, time, weight, and temperature in real- world problems . | 6.M.2.1.2 A Estimate length, time, weight, capacity, temperature, or capacity (volume) in real-world problems. | 7.M.2.1.2 A Estimate length, time, weight, capacity, temperature, or capacity (volume) in real-world problems. | 8.M.2.1.2 A Estimate length, time, weight, capacity, temperature, or capacity (volume) in real-world problems. | | |
| | | 1.M.2.1.3 A Identify time of day by activity – e.g. morning before school, schooltime, after school, after dinner | 2.M.2.1.3 A Identify time of day by activity – e.g. morning before school, schooltime, after school, after dinner | 3.M.2.1.3 A Identify time of day by activity – e.g. morning before school, schooltime, after school, after dinner | 4.M.2.1.3A Match time to a specific activity (e.g. bell or board schedule) | 5.M.2.1.3 A Tell time using a digital or analog clock. | | | | | |
| | | | 2.M.2.1.4 A Select the most appropriate activity given the time of the day. | 3.M.2.1.4 A Identify real world problems related to time. | 4.M.2.1.4 A Identify real-world problems related to time. | 5.M.2.1.4A Identify real world problems related to elapsed time. | 6.M.2.1.3 A Identify real world problems related to elapsed time. | | | | |
| | | | | | | | | 7.M.2.1.3 A Estimate and understand volume permanence in real world settings, i.e. using manipulatives (ex. rice, water) to explore various shaped containers to estimate volume. | 8.M.2.1.3 A Estimate and understand volume permanence in real world settings, i.e. using manipulatives (ex. rice, water) to explore various shaped containers to estimate volume. | | |
| | | | | | | 5.M.2.1.5A Recognize the concept of around (perimeter) for simple polygons, i.e. rectangle and squares. | 6.M.2.1.4 A Recognize the concept of around (perimeter and circumference) for simple shapes, i.e. circle, triangle | 7.M.2.1.4 A Compare area and perimeter of real world surfaces, e.g around the room, around the city, around a box or ball. | 8.M.2.1.4 A Compare area and perimeter of real world surfaces, e.g around the room, around the city, around a box or ball | 9.M.2.1.1 A Compare area and perimeter of real world surfaces, e.g around the room, around the city, around a box or ball | 10.M.2.1.1 A Compare area and perimeter of real world surfaces, e.g around the room, around the city, around a box or ball |

Standard 2: Concepts and Principles of Measurement (continued)

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|---|---|---|--|---|---|--|---|--|---|---|--|
| Goal 2.1: Understand and use U.S. customary and metric measurements (continued from previous page) | | | | 3.M.2.1.5 A Identify a unit of measurement within the U.S. customary system or within the metric system. | 4.M.2.1.5A Use a unit of measurement within the U.S. customary system or within the metric system. | 5.M.2.1.6 A Match equivalent units of measurement within the U.S. customary system | 6.M.2.1.5A Identify equivalent units of measurement | 7.M.2.1.5 A Identify equivalent units of measurement. | 8.M.2.1.5 A Identify equivalent units of measurement | | |
| | K.M.2.1.3A Identify a calendar and how the days of the week are represented. | 1.M.2.1.4 AA Identify a calendar and how the days of the week are represented. | 2.M.2.1.5 Identify a calendar and how the days of the week are represented. | 3.M.2.1.6 A Identify equivalent units of time in days, weeks, or months. | 4.M.2.1.6 A Identify how months of the year are presented in a calendar. | 5.M.2.1.7 A Use a calendar in daily life activities. | | | | | |
| | | | | | 4.M.2.1.7 A Match simple, equivalent units of measurement in the U.S. Customary system. | 5.M.2.1.8 A Match equivalent units of weight and volume. | 6.M.2.1.6 A Identify the location of perimeter and area with rectangles. | 7.M.2.1.6 A Calculate simple problems with perimeter or area of rectangles and triangles. | 8.M.2.1.6 A Solve problems involving perimeter and area of rectangles. | 9.M.2.1.2 A Given a formula, students solve simple problems involving perimeter or area with or without a calculator or manipulatives. | 10.M.2.1.2 A Solve problems involving perimeter and area of triangles or rectangles. |
| | K.M.2.1.4 A Attend to appropriate vocabulary. | 1.M.2.1.5 A Attend to appropriate vocabulary. | 2.M.2.1.6 A Attend to appropriate vocabulary. | 3.M.2.1.7 A Recognize appropriate vocabulary. | 4.M.2.1.8A Recognize appropriate vocabulary. | 5.M.2.1.9 A Recognize appropriate vocabulary. | 6.M.2.1.7 A Use appropriate vocabulary. | 7.M.2.1.7 A Use appropriate vocabulary. | 8.M.2.1.7 A Use appropriate vocabulary. | | |
| Goal 2.2: Apply the concepts of rates, ratios, and proportions. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | 6.M.2.2.1A Match a concrete representation to a simple ratio, i.e. 1 sandwich to 2 people | 7.M.2.2.1A Match a rate (how often) represented in a real world situation, i.e. once a day. | 8.M.2.2.1 A Identify ratios in real world situations, i.e. 2 boys to 1 girl in the class. | 9.M.2.2.1 A Identify proportions in real world situations, ie. size, number or amount of an object or group compared to another | 10.M.2.2.1A Recognize rates, ratios, or proportions, in real world situations. |
| | | | | | | | | 7.M.2.2.2 A Apply a rate to a real world situation | 8.M.2.2.2 A Apply a ratio to a real world situation | 9.M.2.2.2 A Apply the concept of a rate to a real world situation | 10.M.2.2.2 A Apply rates, ratios, or proportion to real world situations. |
| | | | | | | | | | | 9.M.2.2.3 A Identify simple equivalent units of measurements. | 10.M.2.2.3 A Identify equivalent units, comparable units, or conversions. |
| Goal 2.3: Apply dimensional analysis. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | 7.M.2.3.1 A Identify simple dimensions of an object, i.e. height, width, length | 8.M.2.3.1 A Match simple measurement units to dimensions, i.e. lbs to weight, feet to height, cups to volume | 9.M.2.3.1 A Apply simple measurement units to dimensions in real world applications involving length, area, capacity, weight, time, and temperature. | 10.M.2.3.1 A Apply simple measurement units to dimensions in real world applications involving length, area, capacity, weight, time, and temperature. |

Standard 2: Concepts and Principles of Measurement (continued)

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|---|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|---|--|
| Goal 2.4: Apply appropriate techniques and tools to determine measurements. | No objectives at this grade level. | 9.M.2.4.1 A Select and use an appropriate measurement tool correctly. | 10.M.2.4.1 A Select and use an appropriate measurement tool correctly. |
| | | | | | | | | | | 9.M.2.4.2 A Identify errors in measurement situations, i.e. gallons are measured instead of cups, feet instead of inches. | 10.M.2.4.2 A Identify errors in measurement situations, i.e. gallons are measured instead of cups, feet instead of inches. |

<u>Standard 3</u>: Concepts and Language of Algebra and Functions

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|--|---|--|--|---|---|--|---|--|---|---|--|
| Goal 3.1: Use algebraic symbolism as a tool to represent mathematical relationships. | | 1.M.3.1.1A Express numbers using symbolic expression or a concrete system. | 2.M.3.1.1A Express addition & subtraction problems using a concrete system. | 3.M.3.1.1A Use concrete objects to symbolize multiple sets that would be reflected in a simple multiplication problem. | 4.M.3.1.1 A Express the concept of division using concrete objects or pictures | 5.M.3.1.1 A Express the concept of division using concrete objects or pictures | 6.M.3.1.1 A Identify a variable as an unknown quantity using a letter or symbol in a simple equation. | 7.M.3.1.1 A Use the idea of a variable as an unknown quantity using a letter or symbol in a simple equation. | 8.M.3.1.1 A Use the idea of a variable as an unknown quantity using a letter or symbol in simple equations or inequalities. | 9.M.3.1.1 A Use the idea of an unknown quantity as a variable in linear equations and inequalities. | 10.M.3.1.1A Use the idea of an unknown quantity as a variable in, expressions, linear equations and inequalities. |
| | K.M.3.1.1A Use concrete objects to symbolize a number or set. | 1.M.3.1.2 A Substitute concrete object(s) for the symbolic expression of a number. | 2.M.3.1.2A Use concrete objects or pictures to symbolize a number sentence when given an addition word problem. | 3.M.3.1.2A Using a geometric shape to represent a missing number, express an addition or subtraction problem with concrete objects, pictures, or numerals. | 4.M.3.1.2A Use concrete or symbolic system with a one step addition or subtraction real life problem that represents an unknown number. | 5.M.3.1.2A Translate simple word statements into numeric expressions. | 6.M.3.1.2A Translate simple word statements into numeric expressions. | 7.M.3.1.2 A Translate simple word statements into numeric expressions. | 8.M.3.1.2A Translate simple word statements and story problems into numeric expressions | | |
| | | | 2.M.3.1.3 A Show the relationship between addends in fact families using concrete objects or pictures up to sums of 5. | 3.M.3.1.3A Express addition or subtraction statements for a fact family given two addends. | 4.M.3.1.3A Show the relationship between addition and subtraction in fact families using concrete objects or pictures. | 5.M.3.1.3A Show the relationship in fact families for mathematical operations. | | | | | |
| | K.M.3.1.2A Use more or less to indicate wanting to increase or decrease a quantity. | 1.M.3.1.3 A Identify sets of concrete objects using vocabulary (less than, more than, equal to, more, less, same, bigger, smaller, etc). | 2.M.3.1.4 A Compare objects or pictures using the vocabulary (less than, more than, equal to, more, less, same, bigger, smaller, etc). | 3.M.3.1.4 A Compare objects or pictures using the vocabulary or symbols for $\langle <, >, = \rangle$ to express relationships with quantity. | 4.M.3.1.4 Compare objects or pictures using the vocabulary or symbols for (<, >, =) to express relationships with quantity. | 5.M.3.1.4 A Compare objects or pictures using vocabulary or symbols of "<," '>," and "=" to express relationships. | 6.M.3.1.3 A Identify relationships using vocabulary or symbols of "<," ">," and "=". | 7.M.3.1.3 A Identify relationships using vocabulary or symbols of "<," ">,""=," "≠. | 8.M.3.1.3A Identify relationships using vocabulary or symbols of "<," ">,""=," "≠. | | |
| Goal 3.2: Evaluate algebraic expressions. | No objectives at this grade level. | No objectives at this grade level. | 2.M.3.2.1 A Use the commutative property of addition with concrete objects or pictures to solve simple problems (e.g. 3+1=4 then 1+3=?. | 3.M.3.2.1 A Copy the commutative property of multiplication with products up to 6 | 4.M.3.2.1 A Solve multiplication problems with the identity and zero property, with concrete objects if necessary. | 5.M.3.2.1 A Use the following properties as they relate to addition and multiplication: commutative, identity, or zero | 6.M.3.2.1 A Use the following properties in evaluating numerical expressions: commutative, identity, zero, or inverse. | 7.M.3.2.1 A Evaluate simple numeric and algebraic expressions using commutative, identity, zero, inverse properties. | 8.M.3.2.1 A Evaluate the following properties in evaluating simple algebraic expressions: commutative, identity, zero, or inverse | 9.M.3.2.1 A Use appropriate procedures for solving simple algebraic expressions involving variables and rational numbers. | 10.M.3.2.1 A Use appropriate procedures to solve a simple algebraic expression involving variables, integers, or rational numbers. |
| | | | 2.M.3.2.2 A Match corresponding addition problems (e.g., $1 + 2 = 3$, then 2 + 1=3). | 3.M.3.2.2A Identify math problems with the commutative property (e.g., If $1+2 =$ 3, then $2+1=3$ or $1x2=2$ or $2x1=2$). | | | 6.M.3.2.2 A Solve simple algebraic expressions. | 7.M.3.2.2 A Solve two problems in the order of operations given. | 8.M.3.2.2A Solve two problems in the order of operations given. | | |
| | | | | | | | | | 8.M.3.2.3 A Simplify an addition expression. | | |

Standard 3: Concepts and Language of Algebra and Functions (continued)

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|---|--|---|--|---|---|---|---|--|--|---|---|
| Goal 3.3: Solve algebraic equations and inequalities. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | 3.M.3.3.1A Solve missing addend equations, using concrete objects when necessary. | 4.M.3.3.1A Solve missing items or addends equations with concrete objects or symbols. | 5.M.3.3.1A Solve missing addends or simple factor equations, using concrete objects or a calculator when necessary. | 6.M.3.3.1 A Solve one-step equations with whole numbers, using concrete objects or a calculator when necessary. | 7.M.3.3.1A Solve one-step equations, using concrete objects or a calculator when necessary. | 8.M.3.3.1A Solve one- and two- step equations, such as (1+2) + (2+2) =? | 9.M.3.3.1A Use appropriate procedures to solve multi-step equations and inequalities; such as (1+2) = (5-3) or (2+2) does not equal (2+3) | 10.M.3.3.1 A Use appropriate procedures to solve multi-step equations and inequalities; such as (1+2) = (5-3) or (2+2) does not equal (2+3) |
| | | | | | | | | | 8.M.3.3.2 A Match a math problem with a pictorial representation. | 9.M.3.3.2A Match a math problem with a pictorial representation. | 10.M.3.3.2 A Match a math problem with a graphical representation. |
| Goal 3.4: Understand the concept of functions. | K.M.3.4.1 A Attend to a simple repeating pattern (e.g., red, blue, red, blue) | 1.M.3.4.1A Replicate a simple repeating pattern (e.g., red, blue, red, blue) | 2.M.3.4.1A Extend a simple repeating pattern (e.g. ABCABC). | 3.M.3.4.1 A Replicate a numerical pattern when given the +1 rule with addition (e.g. 1, 1+1, 2+1, 3+1, 4+1,) | 4.M.3.4.1.A Copy a pattern using whole numbers and the 1+ rule and then extend the pattern. | 5.M.3.4.1.A Identify a simple pattern using whole numbers. | 6.M.3.4.1.A Identify a simple pattern using whole numbers or fractions as inputs. | 7.M.3.4.1.A Extend simple patterns involving rational numbers, including decimals, as inputs. | 8.M.3.4.1.A Extend simple patterns and match the rule (function) that generated the pattern using rational numbers. | | |
| | | | | | | | 6.M.3.4.2 A Extend whole number patterns, using manipulatives and pictorial representations if needed. | | | | |
| | | | | | | | 6.M.3.4.3. A Identify change in quantity in real world context. | 7.M.3.4.2A Identify when a change in one quantity impacts a change in another quantity. | 8.M.3.4.2A Indicate when a change in one quantity may result in a change in another, and identify the relationship as a positive, negative, or neither. | 9.M.3.4.1.A Use appropriate procedures to solve a simple linear equation involving two variables; such as x + y = 7 | 10.M.3.4.1.A Use appropriate procedures to solve a simple linear equation involving two variables; such as x + y = 7 |
| | K.M.3.4A.2 Attend to appropriate vocabulary. | 1.M.3.4.2 A Attend to appropriate vocabulary. | 2.M.3.4.2 A Attend to appropriate vocabulary. | 3.M.3.4.2 A Recognize appropriate vocabulary. | 4.M.3.4.2A Recognize appropriate vocabulary. | 5.M.3.4.2 A Recognize appropriate vocabulary. | 6.M.3.4.4 A Use appropriate vocabulary. | 7.M.3.4.3 A Use appropriate vocabulary. | 8.M.3.4.3A Use appropriate vocabulary. | | |

Standard 3: Concepts and Language of Algebra and Functions (continued)

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|---|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|--|--|--|---|---|--|
| Goal 3.5: Represent equations, inequalities and functions in a variety of formats. | No objectives at this grade level. | No objectives at this grade level. | 7.M.3.5.1 A Identify a graphic or pictorial representation of a set, using concrete manipulatives when necessary. | 8.M.3.5.1 A Show a simple graphic or pictorial representation of a set (e.g. inventory) | 9.M.3.5.1.A Given graphs, charts, ordered pairs, mappings, or equations, determine whether a relation is a function. | 10.M.3.5.1 Given graphs, charts, ordered pairs, mappings, or equations, determine whether a relation is a function. |
| | | | | | | | | | | 9.M.3.5.2 Evaluate functions written in functional notation. | 10.M.3.5.2 Evaluate functions written in functional notation. |
| | | | | | | | | | | 9.M.3.5.3 Given a function, identify domain and range. | 10.M.3.5.3 Given a function, identify domain and range. |
| Goal 3.6: Apply functions to a variety of problems. | No objectives at this grade level. | 5.M.3.6.1 A Use concrete manipulatives to represent a simple rule for a pattern. | 6.M.3.6.1 A Use concrete manipulatives to represent a pattern and solve simple problems. | 7.M.3.6.1 A Use patterns and linear functions that represent simple problems. | 8.M.3.6.1 A Use patterns and mathematical functions to represent a problem. | 9.M.3.6.1 A | 10.M.3.6.1A |
| | | | | | | | | | | 9.M.3.6.2 A | 10.M.3.6.2 A |

<u>Standard 4</u>: Concepts and Principles of Geometry

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|--|---|--|--|---|--|--|--|---|--|--|---|
| Goal 4.1: Apply concepts of size, shape, and spatial relationships. | K.M.4.1.1.A Recognize simple two dimensional shapes - triangle, square, circle | 1.M.4.1.1.A Recognize and sort two-dimensional shapes - triangle, square or circle | 2.M.4.1.1.A Recognize, name, and sort the two dimensional shapes of triangles, squares, and circles | 3.M.4.1.1.A Compare two- and three- dimensional shapes in the environment, and develop vocabulary to describe the attributes. | 4.M.4.1.1.A Identify, parallel, intersecting and perpendicular lines, and develop vocabulary to describe the attributes. | 5.M.4.1.1.A Identify a polygon and develop vocabulary to describe the attributes. | 6.M.4.1.1A Recognize the difference between a one and to dimensional geometric figures, using their defining properties. | 7.M.4.1.1.A Classify one- and two-, dimensional geometric figures, using their defining properties. | 8. M. 4.1.1.A Classify one-, two-, and three- dimensional geometric figures, using their defining properties. | | |
| | K.M.4.1.2.A Sort or classify objects. | 1.M.4.1.2.A Sort or match objects by more than one attribute. | 2. M.4.1.2 A Sort or classify objects by more than one attribute. | | | 5.M.4.1.2.A Identify right or straight angles without formal measures. | 6.M.4.1.2.A Identify and copy various angles and shapes using appropriate tools. | 7.M.4.1.2.A Select the appropriate tool to draw or measure various angles and shapes. | 8.M.4.1.2.A Select the appropriate tool to draw or measure various angles and shapes. | | |
| | | | | | | 5.M.4.1.3.A Identify points, lines, and line segments. | 6.M.4.1.3 A Differentiate between a line segment and a point | 7.M.4.1.3.A Differentiate between points, lines, rays, and angles. | 8.M.4.1.3 A Differentiate between points, lines, rays, and angles. | | |
| | | | | 3.M.4.1.2 A Recognize sliding and flipping of two- dimensional shapes. | 4.M.4.1.2.A Recognize the results of sliding and flipping two-dimensional shapes. | 5.M.4.1.4.A Identify when a two dimensional shape has been flipped or rotated | 6.M.4.1.4.A Differentiate between reflections, or rotations, or rotations on various shapes. | 7.M.4.1.4.A Replicate the effects of reflections, translations, or rotations on various shapes. | 8.M.4.1.4.A Replicate the effects of reflections, translations, or rotations on various shapes. | | |
| | | | 2.M.4.1.3.A Indicate a line of symmetry. | 3.M.4.1.3.A Identify vertical or horizontal lines of symmetry. | 4.M.4.1.3.A Identify a line of symmetry in two- dimensional shapes. | 5.M.4.1.5.A Match shapes that are congruent, similar, or symmetrical. | 6.M.4.1.5.A Arrange shapes to show congruence, similarities, and line symmetry of shapes. | 7.M.4.1.5.A Arrange shapes to show congruence, similarities, and line symmetry of shapes. | 8.M.4.1.5.A Arrange shapes to show congruence, similarities, and line symmetry of shapes. | 9.M.4.1.1.A Arrange shapes to show congruence, similarities, and line symmetry of shapes. | 10.M.4.1.1.A Arrange shapes to show congruence, similarities, and line symmetry of shapes. |
| | | | | | | | | | | 9.M.4.1.2.A Compare similarities as it relates to size variations in two- dimensional objects. | 10.M.4.1.2.A Compare similarity as it relates to size variations in two- and three- dimensional objects. |
| | | | | | 4.M.4.1.4.A Recognize perimeters and areas of rectangles and squares, using concrete objects. | 5.M.4.1.6.A Indicate the difference between perimeter and area of a polygon. | 6.M.4.1.6.A Recognize the difference in spatial relationships between two- and three- dimensional objects. | 7.M.4.1.6.A Recognize the concept of surface area or volume (capacity). | 8.M.4.1.6.A Recognize the concept of surface area and volume (capacity). | | |
| | K.M.4.1.3 A Attend to appropriate vocabulary. | 1.M.4.1.3A Attend to appropriate vocabulary. | 2.M.4.1.4 A Attend to appropriate vocabulary. | 3.M.4.1.4 A Recognize appropriate vocabulary | 4.M.4.1.5 A Recognize appropriate vocabulary. | 5.M.4.1.7 A Recognize appropriate vocabulary. | 6.M.4.1.7 A Recognize appropriate vocabulary and symbols. | 7.M.4.1.7 A Recognize appropriate vocabulary and symbols. | 8.M.4.1.7 A Use appropriate vocabulary and symbols. | | |

Standard 4: Concepts and Principles of Geometry (continued)

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|---|--|--|--|--|--|--|---|--|--|--|---|
| Goal 4.2: Apply the geometry of right triangles. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | 9. M.4.2.1.A Given the Pythagorean Theorem, identify the hypotenuse. | 10. M.4.2.1 A Given the Pythagorean Theorem, identify the hypotenuse and the right angle. |
| Goal 4.3: Apply graphing in two dimensions. | K.M.4.3.1.A Identify the location of an object relative to another (e.g., next to, under, over, behind). | 1.M.4.3.1.A Indicate whether a group of objects is more or less than a benchmark number (5 or less) | 2.M.4.3.1.A Indicate whether a number is above or below a benchmark (number of 10 or less on a number line. | 3.M.4.3.1.A Identify the point of final destination given directions for movement using 1 to 5 on a horizontal positive number line. | 4.M.4.3.1.A Identify the point of final destination give directions for movement using 1 to 5 on a vertical positive number line | 5. M.4.3.1.A. Identify the difference between a point and a grid. | 6.M.4.3.1.A Identify the first quadrant on a coordinate plane. | 7.M.4.3.1.A Identify an ordered pair in the first quadrant on a coordinate plane. | 8.M.4.3.1.A Identify or plot a point in the first quadrant on a coordinate plane. | 9.M.4.3.1.A Locate quadrants, origin or axes on the Cartesian Coordinate System. | 10.M.4.3.1.A Locate quadrants, origin or axes on the Cartesian Coordinate System. |
| | | | | | | | | | | 9.M.4.3.2.A Identify the trend with a given scatter plot. | 10.M.4.3.2.A Identify the trend with a given scatter plot. |
| | | | | | | | | | | 9.M.4.3.3.A Identify positive or negative slope lines in the first quadrant of a grid. | 10.M.4.3.3.A Identify positive and negative slope lines in the first quadrant of a grid. |
| Goal 4.4: Represent and graph linear relationships. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | 9.M.4.4.1.A Create a graph and plot 2 ordered pairs. | 10.M.4.4.1.A Create a graph and plot 2 ordered pairs. |
| | | | | | | | | | | 9.M.4.4.2.A Interpret a simple table or graph. | 10.M.4.4.2.A Interpret a simple table or graph. |
| | | | | | | | | | | 9.M.4.4.3.A Identify an attribute of a slope or rate of change. | 10.M.4.4.3.A |
| Goal 4.5: Use reasoning skills. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | 10.M.4.5.1.A Identify the elements of a story problem to solve a mathematical equation. |

<u>Standard 5</u>: Data Analysis, Probability, and Statistics

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|--|--|--|--|---|---|--|---|---|---|---|--|
| Goal 5.1: Understand data analysis. | K.M.5.1.1.A Identify information from real object graphs or simple pictographs. | 1.M.5.1.1.A Identify information found in real object graphs or in pictographs to answer questions. | 2.M.5.1.1.A Identify information found in simple bar graphs or pictographs. | 3.M.5.1.1.A Interpret information found in simple bar graphs or circle graphs | 4.M.5.1.1.A Read and interpret simple line graph, bar graphs, or circle graph. | 5.M.5.1.1.A Read and interpret charts, bar graphs, circle graphs, or line graphs. | 6.M.5.1.1.A Read and interpret charts and graphs, including line graphs, bar graphs, frequency tables, or circle graphs. | 7.M.5.1.1.A Read and interpret charts and graphs, including line graphs, bar graphs, frequency tables, or circle graphs. | 8.M.5.1.1.A Read and interpret charts and graphs, including line graphs, bar graphs, frequency tables, or circle graphs. | 9.M.5.1.1.A Read and interpret tables, charts, and graphs, including line graphs, bar graphs, frequency tables, or circle graphs. | 10. M.5.1.1A Read and interpret tables, charts, and graphs, including line graphs, bar graphs, frequency tables, or circle graphs. |
| | | | | | | | 6.M.5.1.2.A Identify conclusions drawn from tables, charts, or graphs. | 7.M.5.1.2.A Explain conclusions drawn from tables, charts, or graphs. | 8.M.5.1.2.A Identify a conclusion drawn from tables, charts, or graphs. | | |
| | K.M.5.1.2 A Attend to appropriate vocabulary. | 1.M.5.1.2 A Attend to appropriate vocabulary. | 2.M.5.1.2 A Attend to appropriate vocabulary. | 3.M.5.1.2 A Recognize appropriate vocabulary. | 4.M.5.1.2A Recognize appropriate vocabulary. | 5.M.5.1.2 A Recognize appropriate vocabulary. | 6.M.5.1.3 A Use appropriate vocabulary. | 7.M.5.1.3 A Use appropriate vocabulary. | 8.M.5.1.3 A Use appropriate vocabulary. | | |
| Goal 5.2: Collect, organize, and display data. | K.M.5.2.1.A Using a model, recreate a graph using real objects or pictorial representations. | 1.M.5.2.1.A Use data in real object graphs or in pictographs to answer a question. | 2.M.5.2.1.A Use data in bar graphs in order to answer a question. | 3.M.5.2.1.A Organize and display data in bar graphs or circle graphs in order to answer a question. | 4.M.5.2.1.A Organize data in a line graph, bar graph, or circle graph to answer a question. | 5.M.5.2.1.A Organize and display the data in charts, bar graphs, and circle or line graphs using title, labels, and reasonable scales. | 6.M.5.2.1.A Collect, organize, and display the data with appropriate notation in charts or graphs. | 7.M.5.2.1.A Collect, organize, and display the data with appropriate notation in charts or graphs. | 8.M.5.2.1.A Collect, organize, and display the data in charts or graphs. | 9.M.5.2.1A Collect, organize, and display data in tables, charts, or graphs. | 10. M.5.2.1.A. Collect, organize, and display data in tables, charts, or graphs |
| | | | 2.M.5.2.2.A Use tally marks, pictures, or objects to represent data. | | 4.M.5.2.2.A Display data in a bar graph using a title and reasonable scales. | | | | | | |
| Goal 5.3: Apply simple statistical measurements. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | 4.M.5.3.1.A Find the mode of a simple set of whole number data using manipulatives when necessary. | 5.M.5.3.1.A Find the median and mode - with simple sets of arranged data between 1-9 using whole numbers. | 6.M.5.3.1.A Find the median or mode – with simple sets of data. | 7.M.5.3.1.A Find the median and mode – with simple sets of data. | 8.M.5.3.1.A Identify the measure of central tendency – median and mode. | 9.M.5.3.1.A Find the mean, median, mode and range. | 10.M.5.3.1.A Use basic statistical concepts, including mean, median, mode or range. |
| | | | | | | 5.M.5.3.2.A Find the end points of the range of a set of data using whole numbers 1-10. | 6.M.5.3.2.A Calculate the range of a set of data using whole numbers 1-10. | 7.M.5.3.2.A Identify or locate distribution of data, including range and frequency. | 8.M.5.3.2.A Identify or locate distribution of data, including range, frequency, gaps, or clusters. | 9.M.5.3.2.A Make predictions and draw conclusions based on a simple set of data and its statistical measures. | 10.M.5.3.2.A Make predictions and draw conclusions based on a simple set of data and its statistical measures. |

Standard 5: Data Analysis, Probability, and Statistics (continued)

| Goals: | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 | Grade 8 | Grade 9 | Grade 10 |
|---|------------------------------------|------------------------------------|------------------------------------|--|--|---|---|---|---|--|---|
| Goal 5.4: Understand basic concepts of probability. | No objectives at this grade level. | 4.M.5.4.1.A Predict the results of simple probability experiments using coins or spinners (e.g., 3 out of 6 choices). | 5.M.5.4.1.A Predict results of simple probability experiments using coins and spinners. | 6.M.5.4.1.A Perform and record results of simple probability experiments. | 7.M.5.4.1.A Perform and record results of simple probability experiments. | 8.M.5.4.1.A Reproduce a situation of probability using a common example of coin toss or rolling of dice. | 9.M.5.4.1.A Find probability based on an independent event (Lottery). | 10.M.5.4.1.A Find probability based on a dependent event (Deal or No Deal). |
| | | | | | | | | 7.M.5.4.2.A Recognize equally likely outcomes. | 8.M.5.4.2.A Recognize equally likely outcomes. | | |
| | | | | | | | | 7.M.5.4.3.A Identify events that have probability ranges from low to high extremes. | 8.M.5.4.3 A. Match probability range from low to high to situations. | 9.M.5.4.2.A Recognize the difference between experimental (large number of trials) and theoretical (mathematical formula) probability. | 10.M.5.4.2.A Recognize the difference between experimental (large number of trials) and theoretical (mathematical formula) probability. |
| | | | | | | 5.M.5.4.2.A Use the language of probability. | 6.M.5.4.2.A Use the language of probability. | 7.M.5.4.4.A Use the language of probability. | 8.M.5.4.4.A Use the language of probability. | | |
| Goal 5.5: Make predictions or decisions based on data. | No objectives at this grade level. | No objectives at this grade level. | No objectives at this grade level. | 3.M.5.5.1A Make predictions based on data. | 4.M.5.5.1 A Make predictions based on data. | 5.M.5.5.1.A Make predictions based on data. | 6.M.5.5.1A Make predictions based on data. | 7.M.5.5.1A Recognize predictions based on simple theoretical probabilities. | 8.M.5.5.1A Recognize predictions based on experimental probabilities. | 9.M.5.5.1.A Make predictions based on randomness, chance, equally likely events, or probability. | 10.M.5.5.1A Make predictions based on randomness, chance, equally likely events, or probability. |
| | | | | | | | | | 8.M.5.5.2.A Perform a statistical experiment and interpret results using tables, charts, or graphs. | 9.M.5.5.2.A Perform statistical experiments and use tables, charts, or graphs to make predictions or decisions based on data. | 10.M.5.5.2.A Perform statistical experiments and use tables, charts, or graphs to make predictions or decisions based on data. |
| | | | | | | | | 7.M.5.5.2 A Use appropriate vocabulary. | 8.M.5.5.3 A Use appropriate vocabulary. | 9.M.5.5.3.A Conduct and interpret results of statistical experiments. | 10.M.5.5.3.A Conduct and interpret results of statistical experiments. |