Grade 3 – Mathematics

Above Mastery
The student demonstrates fundamental knowledge that exceeds the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following complex task without assistance: recognize whole numbers to twenty (20) and count to twenty (20); find a missing part of a pattern; model a circle, square, triangle; describe spatial relationships of over, under, left and right; and recognition of a rectangle; determine which measurement tool will be used in certain circumstances; identify value of a coin; develop a graph; identify patterns in a graph.

Mastery
The student demonstrates fundamental knowledge that meets the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following without assistance: recognize whole numbers to nine (9); count to nine (9) and solve single-digit addition problems with sums to nine (9); recognize and complete a two-object pattern; classify a square, circle, and triangle; perform spatial relationships over, under, left, and right; classifying measuring devices according to what they measure (length, weight and temperature) and identify coins as penny, nickel, dime and quarter; use interviews to collect data; use observation to collect data.

Partial Mastery
The student demonstrates inconsistent performance of fundamental knowledge characterized by errors and/or omissions in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following with assistance: recognize whole numbers to five (5); count to five (5) and demonstrate an understanding of addition as combining collections/counting things; copy a pattern; recognize that shapes are similar and different; describe in and out; match a ruler, scale, thermometer and clock; discriminate between a penny, nickel, dime, and quarter; given objects, sort into categories.

Novice
The student demonstrates substantial need for the development of fundamental knowledge, characterized by fragmented and incomplete performance in number and operations, algebra, geometry, measurement, data analysis and probability. The student attempts to perform the following with assistance: demonstrate the concept of one (1) and demonstrate one-to-one correspondence between sets of objects; identify a repeated event; manipulate concrete geometric shapes; perform in and out relationships; manipulate a ruler, scale, thermometer, and clock; determine if an object is a coin; add an object to similar collection.

Grade 4 – Mathematics

Above Mastery
The student demonstrates fundamental knowledge that exceeds the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following complex task without assistance: recognize whole numbers greater than twenty (20); identify two equal parts as the fractional part 1/2 and solve addition problems with sums greater than twenty independently; solve basic single-digit subtraction independently; predict and extend a pattern; identify similarities and differences between geometric shapes; compare length, mass, temperature of objects, indicate time to the hour, identify mixed coins by values and order by relative worth; develop and interpret graphs, using words and numbers.

Mastery
The student demonstrates fundamental knowledge that meets the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following without assistance: recognize two-digit whole numbers to twenty (20); identify two equal parts as a whole and solve addition problems with sums to nineteen; model subtraction problems with or without manipulatives; recognize and complete a three-object/item pattern; classify and model a circle, square, rectangle and a triangle; recognize length as long/short, weight as heavy/light, temperature as hot/cold and recognize time in relationship to a daily schedule and identify values of coins; develop and interpret graphs using objects or pictures.

Partial Mastery
The student demonstrates inconsistent performance of fundamental knowledge characterized by errors and/or omissions in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following with assistance: recognize whole numbers to ten (10); recognize equal parts and solve addition problems with sum of nine using manipulatives; compare two quantities as more or less; duplicate a pattern; recognize shapes, circles, squares, rectangles, and triangles; sort items by their length and temperature and show appropriate action at a specific time when associated with a timer and match coin to its value; fill in appropriate areas of a graph.

Novice
The student demonstrates substantial need for the development of fundamental knowledge, characterized by fragmented and incomplete performance in number and operations, algebra, geometry, measurement, data analysis and probability. The student attempts to perform the following with assistance; identify a number from a non-number and recognize one-to-one correspondence; give objects away as directed; identify items in a pattern; match identical shapes of a circle, square or triangle; touch the picture of the item that is short, long, hot, cold and associate an object with a scheduled activity and place coins into correct value container; identify items to be graphed.

Grade 5 – Mathematics

Above Mastery
The student demonstrates fundamental knowledge that exceeds the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following complex task without assistance: identify fractional parts 1/3 and 1/4; recognize two-digit numbers to fifty (50) and solve double-digit addition with regrouping; subtract two-digit numbers; extend a pattern; describe the attribute of three-dimensional shapes; use actual device to measure a given item, identify time to the hour; interpret data from a bar graph containing multiple bars.

Mastery
The student demonstrates fundamental knowledge that meets the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following without assistance: recognize two-digit whole numbers to forty (40); identify the fractional part 1/2 and solve double-digit addition without regrouping; subtract single-digit numbers; complete a four-step pattern; describe a four-object/step pattern; classify three-dimensional objects (cube, spear, and pyramid); measure length and weight using nonstandard forms of measurement (paperclips, counting bears, etc.) and identify time to the hour; develop bar graphs and interpret data.

Partial Mastery
The student demonstrates but inconsistent performance of fundamental knowledge characterized by errors and/or omissions in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following with assistance: recognize two-digit numbers to thirty (30); identify that two equal parts make a whole and solve single-digit addition without regrouping; model single-digit subtraction; follow a pictorial pattern; sort three-dimensional shapes; determine longer/shorter or heavier/lighter using nonstandard forms of measurement and match the clock to the hour; copy a bar graph.

Novice
The student demonstrates substantial need for the development of fundamental knowledge, characterized by fragmented and incomplete performance in number and operations, algebra, geometry, measurement, data analysis and probability. The student attempts to perform the following with assistance: match single-digit numbers to five (5); identify a picture as complete and model one more and one less; continue a pattern based on a single attribute such as color, shape, or rhythm; recognize three dimensional geometric shapes; position items for measurement and manipulate a clock; recognize a paper graph from two items.

Grade 6 – Mathematics

Above Mastery
The student demonstrates fundamental knowledge that exceeds the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following complex task without assistance: connect numerals to number words; recognize that 1/3 is more than 1/4.; and apply addition and subtraction to solve real world problems; complete patterns by shapes, colors, and numbers, more than one item in a pattern; select pictorial representations of objects with right and obtuse angles and draw a right angle; find the area of a figure by multiplying length by width, determine perimeter of a rectangle, measure real world objects with an inch ruler, tell time to five minute intervals; interpret graphs.

Mastery
The student demonstrates fundamental knowledge that meets the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following without assistance: recognize numbers 1-60; assign numbers 1-60 to corresponding set of objects; identify the fractional part 1/4 and 1/3; and add two-digit numbers with and without regrouping and subtract two digit numbers without regrouping; recognize and complete a pattern; recognize and replicate right and obtuse angles; determine perimeter or area of an object, use a ruler to measure length in inches; to tell time to the half hour; collect, display and read data using appropriate graphs (pictorial, bar and line graphs).

Partial Mastery
The student demonstrates but inconsistent performance of fundamental knowledge characterized by errors and/or omissions in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following with assistance: compare two quantities of objects; identify that 1/4 and /3 are less than a whole and model addition and subtraction problems using single-digit numbers; follow a pictorial/geometric pattern; continue a pattern; from two items select the one with an angle and trace a right angle or an obtuse angle; count the squares for area or perimeter, sort by length, and tell time to the hour; fill in bars on a graph.

Novice
The student demonstrates substantial need for the development of fundamental knowledge, characterized by fragmented and incomplete performance in number and operations, algebra, geometry, measurement, data analysis and probability. The student will attempt to perform the following with assistance: count with one-to-one correspondence; identify 1/4 of a whole and identify a number from a set of unrelated objects; replicate/copy the pattern; match angles; color within the lines of a polygon, identify a ruler from a non-ruler, and identify a clock; identify a bar graph.

Grade 7 – Mathematics

Above Mastery
The student demonstrates fundamental knowledge that exceeds the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following complex task without assistance: write numbers up to 20, recognize 1/2 as greater than 1/3 and 1/3 as greater than 1/4 and demonstrate the concept of multiplication, use more than one operation (add, subtract, multiply) to solve practical problems; predict a pattern; represent an equality; identify and locate different angles; predict volume, select which appropriate measuring tool for an object, and identify time to the nearest fifteen minute intervals; categorize data and determine frequency of occurrence for each category and organize by range.

Mastery
The student demonstrates fundamental knowledge that meets the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following without assistance: recognize numbers up to 100, recognize whole numbers 1 to 100 and the difference among 1/2, 1/4, and 1/3; assign a number 1- 100 to a correct value; match fractions (1/2, 1/3, and 1/4) with corresponding picture or object and multiply single-digit numbers, use addition and subtraction to solve an application problem; recognize and complete a counting pattern; given two whole numbers, which is greater or less than; recognize and replicate angles; (right, acute, and obtuse); determine the volume of an object using nonstandard measurement, measure length with a customary ruler and yard stick, and tell time to nearest time intervals; organize into frequency of occurrence and range.

Partial Mastery
The student demonstrates inconsistent performance of fundamental knowledge characterized by errors and/or omissions in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following with assistance: recognize numbers to 20, identify whole numbers on a number line, identify 1/2 as one of two parts, 1/3 as one of three parts and 1/4 as one of four parts and multiply single-digits up to 5, recognize and indicate whether items are added or subtracted from group; sort, manipulate and group by number values; given group of values, indicate which is more; identify a specified angle on a familiar object; determine capacity (more/less), identify a ruler and a yardstick, and identify time in the hour and half-hour intervals; identify items that belong in a category.

Novice
The student demonstrates substantial need for the development of fundamental knowledge, characterized by fragmented and incomplete performance in number and operations, algebra, geometry, measurement, data analysis and probability. The student will attempt to perform the following with assistance: point to a given number on a number line; select 1/2 of a picture or object depicting 1/2, select the fractional part as directed and multiply 1 and 2; recognize that when items are added to or subtracted, the result is more or less; group like colors and shapes; indicate which is bigger - a whole item or a partial item; duplicate an angle; place objects in containers, identify a ruler, identify time in hour intervals; identify objects in a category.

Grade 8 – Mathematics

Above Mastery
The student demonstrates fundamental knowledge that exceeds the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following complex task without assistance: recognize numbers through 100 and match them with their word name; count groups of 10s to 100; recognize decimal, fraction, percent equivalences and choose the correct operation for a given problem; extend a counting pattern and demonstrate the concept of one-half, one-third, and one-forth through daily activities and decimals .5, .25, .75 through provided coins; identify and locate different kinds of angles; identify parallel lines; determine and measure the perimeter of a rectangle, find the area of a figure, use measurement tool needed to measure different lengths; make a graph from a survey and make a prediction based on real life situations.

Mastery
The student demonstrates fundamental knowledge that meets the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following without assistance: recognize numbers up to 100; count by 10s to 100; recognize decimal and fraction equivalences and apply various strategies and operations to solve practical problems involving whole numbers; recognize and extend mathematical patterns and given fractions one-half, one-third, one-forth, and decimals .5, .25, .75 identify which is greater than/less than; identify the angles of an object in the environment; identify lines; determine the perimeter and area of a rectangle; utilize the concept of time in real life; solve problems to determine possible combinations.

Partial Mastery
The student demonstrates but inconsistent performance of fundamental knowledge characterized by errors and/or omissions in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following with assistance: compare sets of objects to find more, less, equal; recognize that .5 (1/2) is less than a whole; recognize single-digit numbers and match them with the number word and combine items to create a specified number; follow a counting pattern by counting two's, five's, and ten's and given fractional representation of two objects identify which is more; assemble different kinds of angles; assemble lines; compare objects by linear features; follow a daily schedule of two or more events; make a prediction based on two choices.

Novice
The student demonstrates substantial need for the development of fundamental knowledge, characterized by fragmented and incomplete performance in number and operations, algebra, geometry, measurement, data analysis and probability. The student will attempt to perform the following with assistance: identify numbers 1 - 5 with corresponding objects; identify a part of an object versus a whole object and match a number to a given set; follow a counting pattern and given a whole object and a partial object, identify which is "more than" which is "less than"; recognize an angle; recognize points; follow a daily schedule for a minimum of one activity; predict the effect of an action.

Grade 10 Mathematics

Above Mastery
The student demonstrates fundamental knowledge that exceeds the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following complex task without assistance: choose correct operations to solve application problems; divide whole unit into equal portions; determine amount of dollars/change needed for a purchase; demonstrate the concepts of greater than, less than, and equal to when dealing with money and identify the slope of a line graph (rising, falling, constant); recognize and use lines in real-life situations; use lines and points to follow directions within the community; find and name different angles within the community (right, straight, obtuse, acute); apply spatial relations in real-world settings; use measurement skills to perform real life situations; use collected data to make personal decisions.

Mastery
The student demonstrates fundamental knowledge that meets the extended standards in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following without assistance: calculate groups of numbers using four basic operations; divide a whole unit into 1/4, 1/3, and 1/2; find the value of a combination of coins/currency; use algebraic symbols (<,>, =) to compare two sets and use a graph to represent relations in numbers; use spatial relationships (geometric shapes, forms and figures, I.e., points, lines, angles and shapes) to solve problems; solve practical problems involving length, weight and capacity; collect, organize and utilize numerical information and data.

Partial Mastery
The student demonstrates but inconsistent performance of fundamental knowledge characterized by errors and/or omissions in number and operations, algebra, geometry, measurement, data analysis and probability. The student will perform the following with assistance: use manipulatives to add or subtract whole numbers up to twenty; arrange parts to complete a whole; identify name and value of money: coins (one, five, ten, and 25 cents) and dollars ($1, $5, $10, $20); identify a missing part in a sequence; show "more than," "less than," "most," "least," "same" and model horizontal and vertical lines; model lines within the environment; reproduce different kinds of angles; locate geometric shapes in the environment; use appropriate tools for measurement; classify information using charts, logs, checklist.

Novice
The student demonstrates substantial need for the development of fundamental knowledge characterized by fragmented and incomplete performance in number and operations, algebra, geometry, measurement, data analysis and probability. The student will attempt to perform the following with assistance: given a quantity of objects, recognize when items are added or taken away; differentiate between a whole unit and a fraction; differentiate between a coin and a non-coin; identify a missing part, show more than; recognize as going "up" or "across" (vertical/horizontal); recognize lines; represent angles; sort objects according to shapes; recognize the differences in measure terminology; recognize like items.