

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 performs the following complex tasks without assistance: recognizes whole numbers to twenty (20); counts to twenty (20); finds a missing part of a pattern; models a circle, square, triangle; describes spatial relationships of over, under, left and right; recognizes a rectangle; determines which measurement tools will be used in certain circumstances; identifies value of a coin; develops a graph; identifies 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 performs the following tasks without assistance: recognizes whole numbers to nine (9); counts to nine (9); solves single-digit addition problems with sums to nine (9); recognizes and completes a two-object pattern; classifies a square, circle, and triangle; performs spatial relationships over, under, left, and right; classifies measuring devices according to what they measure (length, weight and temperature); identifies coins as penny, nickel, dime and quarter; uses interviews to collect data; uses 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 performs the following tasks with assistance: recognizes whole numbers to five (5); counts to five (5); demonstrates an understanding of addition as combining collections/counting things; copies a pattern; recognizes that shapes are similar and different; describes in and out; matches a ruler, scale, thermometer and clock to use; discriminates between a penny, nickel, dime, and quarter; sorts given objects 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 tasks with assistance: demonstrates the concept of one (1); demonstrates one-to-one correspondence between sets of objects; identifies a repeated event; manipulates concrete geometric shapes; **performs in and out relationships**; manipulates a ruler, scale, thermometer, and clock; determines if an object is a coin; adds 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 performs the following complex tasks without assistance: recognizes whole numbers greater than twenty (20); identifies one of two equal parts as the fractional part one-half; solves addition problems with sums greater than twenty independently; solves basic single-digit subtraction independently; predicts and extends a pattern; identifies similarities and differences between geometric shapes; compares length, mass, temperature of objects, indicate time to the hour, identifies mixed coins by values and orders by relative worth; develops and interprets 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 performs the following tasks without assistance: recognizes two-digit whole numbers to twenty (20); identifies two equal parts as a whole; solves addition problems with sums to nineteen; models subtraction problems with or without manipulatives; recognizes and completes a three-object/item pattern; classifies and models a circle, square, rectangle and a triangle; recognizes length as long/short, weight as heavy/light, temperature as hot/cold; recognizes time in relationship to a daily schedule; identifies values of coins **and determines relative values**; develops and interprets 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 performs the following tasks with assistance: recognizes whole numbers to ten (10); recognizes equal parts; **and**-solves addition problems with sum of nine using manipulatives; compares two quantities as more or less; duplicates a pattern; recognizes shapes, circles, squares, rectangles, and triangles; sorts items by their length and temperature; shows appropriate action at a specific time when associated with a timer; matches a coin to its value; fills 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 tasks with assistance; identifies a number from a non-number; recognizes one-to-one correspondence; gives objects away as directed; identifies items in a pattern; matches identical shapes of a circle, square or triangle; touches the picture of the item that is short, long, hot, cold; associates an object with a scheduled activity; places coins into correct value container; identifies 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 performs the following complex tasks without assistance: identifies fractional parts one-third and one-fourth; recognizes two-digit numbers to fifty (50); solves double-digit addition with regrouping; subtracts two-digit numbers; extends a pattern; describes the attribute of three-dimensional shapes; uses actual device to measure **a**-given items; identifies time to the **half**-hour; interprets 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 performs the following tasks without assistance: recognizes two-digit whole numbers to forty (40); identifies the fractional part one-half; solves double-digit addition without regrouping; subtracts single-digit numbers; completes a four-step pattern; describes a four-object/step pattern; classifies three-dimensional objects (cube, sphere, and pyramid); measures length and weight using nonstandard forms of measurement (paperclips, counting bears, etc.); identifies time to the hour; develops bar graphs and interpret 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 performs the following tasks with assistance: recognizes two-digit numbers to thirty (30); identifies that two equal parts make a whole; solves single-digit addition without regrouping; models single-digit subtraction; follows a pictorial pattern; sorts three-dimensional shapes; determines longer/shorter or heavier/lighter using nonstandard forms of measurement; matches the clock to the hour; copies 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 tasks with assistance: matches single-digit numbers to five (5); identifies a picture as complete; models one more and one less; continues a pattern based on a single attribute such as color, shape, or rhythm; recognizes three dimensional geometric shapes; positions items for measurement; manipulates a clock; recognizes 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 performs the following complex tasks without assistance: connects numerals to number words; recognizes that one-third is more than one-fourth; applies addition and subtraction to solve real world problems; completes patterns with more than one item in a pattern by shapes, colors, and/or numbers; selects pictorial representations of objects with right and obtuse angles; draws a right **and obtuse** angle; finds the area of a figure by multiplying length by width; determines **and measures the** perimeter of a rectangle; measures real world objects with an inch ruler; tells time to five minute intervals; interprets 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 performs the following tasks without assistance: recognizes numbers 1-60; assigns numbers 1-60 to a corresponding set of objects; identifies the fractional part one-fourth and one-third; adds two-digit numbers with and without regrouping; subtracts two digit numbers without regrouping; recognizes and completes a pattern; recognizes and replicates right and obtuse angles; determines perimeter or area of an object **using nonstandard measurements**; uses a ruler to measure length in inches; tells time to the half hour; collects, displays and reads data using appropriate graphs (pictorial, bar and line graphs).

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 performs the following tasks with assistance: compares two quantities of objects; identifies that one-fourth and one-third are less than a whole; models addition and subtraction problems using single-digit numbers; follows a pictorial/geometric pattern; continues a pattern; correctly selects the item with an angle from two choices; traces a right angle or an obtuse angle; counts the squares for area or perimeter; sorts by length; tells time to the hour; fills 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 attempts to perform the following tasks with assistance: counts with one-to-one correspondence; identifies one-fourth of a whole; **and** identifies a number from a set of unrelated objects; replicates/copies the pattern; matches angles; colors within the lines of a polygon; identifies a ruler from a non-ruler; identifies a clock; identifies 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 performs the following complex tasks without assistance: writes numbers up to 20; recognizes one-half as greater than one-third and one-third as greater than one-fourth; demonstrates the concept of multiplication; uses more than one operation (add, subtract, multiply) to solve practical problems; predicts a pattern; represents an equality; identifies and locates different angles; predicts volume; selects appropriate measuring tool for **measuring** an object; identifies time to nearest fifteen minute intervals; categorizes data and determines frequency of occurrence for each category and organizes 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 performs the following tasks without assistance: recognizes numbers up to 100; recognizes whole numbers 1-100; recognizes the difference among one-half, one-fourth, and one-third; assigns a number 1-100 to a correct value; matches fractions (one-half, one-third, and one-fourth) with corresponding picture or object; multiplies single-digit numbers; uses addition and subtraction to solve an application problem; recognizes and completes a counting pattern; correctly chooses between two whole numbers to indicate which is greater or less than; recognizes and replicates angles; (right, acute, and obtuse); determines the volume of an object using nonstandard measurement; measures length with a customary ruler and yard stick; tells time to nearest **time = five minute** intervals; organizes data 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 performs the following tasks with assistance: recognizes numbers to 20; identifies whole numbers on a number line; identifies one-half as one of two parts, one-third as one of three parts and one-fourth as one of four parts; ~~and~~ multiplies single-digits up to 5; recognizes and indicates whether items are added or subtracted from group; sorts, manipulates and groups by number values; indicates from a given groups of **values-items** which **value** is more; identifies a specified angle on a familiar object; determines capacity (more/less); identifies a ruler and a yardstick; identifies time by hour and half-hour intervals; identifies 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 attempts to perform the following tasks with assistance: points to a given number on a number line; selects one-half from a picture/object **representation**; ~~selects a fractional part as directed~~; multiplies by 1 and 2; recognizes that when items are added to or subtracted, the result is more or less; groups like colors and shapes; indicates which is bigger - a whole item or a partial item; duplicates an angle; places objects in containers; identifies a ruler; identifies time in hour intervals; identifies 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 performs the following complex tasks without assistance: recognizes numbers through 100 and matches them with their word name; counts groups of 10s to 100; recognizes decimal, fraction, percent equivalences (**one-half, one-fourth and one-tenth**); ~~and~~ chooses the correct operation for a given problem; extends a counting pattern; demonstrates the concept of one-half, one-third, and one-fourth through daily activities; demonstrates the concept of decimals .05, .25, .75 using provided coins; identifies and locates different kinds of angles; identifies parallel lines; determines and measures the perimeter of a rectangle; finds the area of a figure; uses **a-correct** measurement tool needed to measure different lengths; makes a graph from a survey; makes 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 performs the following without assistance: recognizes numbers up to 100; count by 10s to 100; recognizes decimal and fraction equivalences; ~~and~~ applies various strategies and operations to solve practical problems involving **whole-real** numbers; recognizes and extends mathematical patterns; identifies which fractions one-half, one-third, one-fourth, and decimals .5, .25, .75 are greater than/less than; identifies the angles of an object in the environment; identifies lines; determines the perimeter and area of a rectangle; utilizes the concept of time in real life; solves problems to determine possible combinations.

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 performs the following tasks with assistance: compares sets of objects to find more, less, equal; recognizes that .50 (one-half) is less than a whole; recognizes single-digit numbers and matches them with the number word; combines items to create a specified number; follows a counting pattern by counting two's, five's, and ten's; identifies which fractional representation of two objects is more; assembles different kinds of angles; assembles lines; compares objects by linear features; follows a daily schedule of two or more events; makes 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 attempts to perform the following tasks with assistance: identifies numbers 1-5 with corresponding objects; identifies a part of an object versus a whole object; matches a number to a given set; follows a counting pattern; identifies from a given whole object and partial object which is "more than" and which is "less than"; recognizes an angle; recognizes points; follows a daily schedule for a minimum of one activity; predicts 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 performs the following complex tasks without assistance: chooses correct operations to solve application problems; divides a whole unit into equal portions; determines amount of dollars/change needed for a purchase; demonstrates the concepts of greater than, less than, and equal to when dealing with money; identifies the slope of a line graph (rising, falling, constant); recognizes and uses lines in real-life situations; uses lines and points to follow directions within the community; finds and names different angles within the community (right, straight, obtuse, acute); applies spatial relations in real-world settings; uses measurement skills to perform real life situations; uses 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 performs the following tasks without assistance: calculates groups of numbers using four basic operations; divides a whole unit into one-fourth, one-third, and one-half; finds the value of a combination of coins/currency; uses algebraic symbols (<, >, =) to compare two sets; uses a graph to represent relations in numbers; uses spatial relationships (geometric shapes, forms and figures, i.e., points, lines, angles and shapes) to solve problems; solves practical problems involving length, weight and capacity; collects, organizes and utilizes numerical information and data.

Partial Mastery

The student demonstrates **inconsistence performance of fundamental** knowledge characterized by errors and/or omissions in number and operations, algebra, geometry, measurement, data analysis and probability. The student performs the following tasks with assistance: uses manipulatives to add or subtract whole numbers up to twenty; arranges parts to complete a whole; identifies name and value of money: coins (.01, .05, .10, and .25) and dollars (\$1, \$5, \$10, \$20); identifies a missing part in a sequence; shows "more than," "less than," "most," "least," "same"; models horizontal and vertical lines; models lines within the environment; reproduces different kinds of angles; locates geometric shapes in the environment; uses appropriate tools for measurement; classifies 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 attempts to perform the following tasks with assistance: recognizes when items are added or taken away from a given quantity of objects; differentiates between a whole unit and a fraction; differentiates between a coin and a non-coin; identifies a missing part; shows "more than"; recognizes **lines** as going "up" or "across" (vertical/horizontal); recognizes lines; represents angles; sorts objects according to shapes; recognizes the differences in measure terminology; recognizes like items.