ISAT Mathematics Performance Definitions
Grade 3

EXCEEDS STANDARDS

Third-grade students whose measured performance exceeds standards are able to identify, read, write, represent, and model whole numbers beyond 100,000. They use a variety of strategies and all four operations to represent and solve multi-step problems. They select the relevant information needed to set up and solve application problems, choosing the correct operation(s) and an appropriate strategy. They check the accuracy of their solution by solving it in another way. They can use fractions to describe pictures or data.

Third-grade students whose measured performance exceeds standards are able to use a ruler and other measuring tools accurately. They can read a thermometer using the Fahrenheit or Celsius scale. They can determine the perimeter and area of geometric figures by using methods beyond counting. They can estimate the area of irregularly shaped objects drawn on square grids. In using money, they are able to compare units and make change for amounts beyond $10.00. Given a number sentence, they can write a number story. They can solve a number sentence that includes multiple variables. On a Cartesian Coordinate Graph, they can plot and connect points.

Third-grade students whose measured performance exceeds standards can distinguish between rays, lines, line segments and angles and can identify rectangular, triangular, hexagonal and octagonal prisms and their properties. Given a two-dimensional drawing, they can visualize and identify the three-dimensional shape that would result from folding along lines of the given two-dimensional shape. They can determine all the lines of symmetry of a given shape. They demonstrate an understanding of parallel, perpendicular and similarity. They are able to sort, classify, compare and contrast all simple polygons in addition to trapezoid, parallelogram, quadrilateral and rhombus.

Third-grade students whose measured performance exceeds standards can analyze and interpret data and make inferences and predictions beyond the data. They can compute the probability of events. Sometimes they can list all of the possible outcomes of a simple two-stage event. They can write the probability of an event using a fraction. Given a circle, bar or pictograph, students can create a different kind of graph using the same data.

MEETS STANDARDS

Third-grade students whose measured performance meets standards are able to identify, read, write, represent, and model whole numbers up to 100,000. They can order and compare whole numbers up to 10,000 and decimals using monetary units. They can represent and solve basic addition and subtraction problems that involve whole numbers up to four digit sums. These students can solve multiplication and division problems with single digit factors. They are beginning to be able to select the relevant information needed to set up and solve elementary application problems, choosing the correct operation and an appropriate strategy. They can write and represent fractions 1/2, 1/4, 1/3, and 1/8.

Third-grade students whose measured performance meets standards can use a ruler to measure to the nearest inch or cm. They can use measurements to compare the size of objects. They can determine weight/mass and liquid measures using ounces, pounds, grams and liters. They can determine equivalent measures of time. They can read a thermometer and demonstrate a beginning understanding of the Fahrenheit scale. They can determine the perimeter and area of straight-sided geometric figures drawn on square grids. They can measure volume by counting cubes. In using money, they are able to compare units and make change for amounts up to $10.00. They can make reasonable measurement estimates.

Third-grade students whose measured performance meets standards can describe, extend and find the missing components of patterns. They can make generalizations from specifics. Given a specific number story, they can write a number sentence using variables, equality and inequality notation. They can solve a number sentence that includes a variable. On a Cartesian Coordinate Graph, they can find a point given the coordinates and can name the coordinates of a given point.

Third-grade students whose measured performance meets standards can identify points, lines, circles, simple polygons and the three-dimensional shapes of cone, cube, cylinder, sphere and pyramid and their properties. This includes congruency, visual similarity and the number of sides, faces and vertices. Given several drawings, they can identify the picture with the correct line of symmetry drawn. They are able to sort, classify, compare and contrast circles, squares, rectangles, triangles, pentagons, hexagons and octagons.

Third-grade students whose measured performance meets standards can analyze and interpret data using tallies, tables, charts, Venn diagrams, bar, picture and pictographs. They can use “likely,” “unlikely,” and “impossible” to describe possible outcomes.

BELOW STANDARDS

Third-grade students whose measured performance is below standards are able to count, read, write and order whole numbers below 1,000. They can inconsistently solve basic addition and subtraction problems that involve whole numbers up to four-digit sums. These students can inconsistently solve multiplication and division problems with single digit factors. They are most often able to select the relevant information needed to set up and solve elementary application problems, choosing the correct operation and an appropriate strategy. They can write and represent consistently the fraction 1/2 and sometimes 1/3, 1/4 and 1/8.

Third-grade students whose measured performance is below standards can inconsistently use a ruler to measure to the nearest inch or centimeter. They are beginning to demonstrate an understanding of where on the ruler to begin measuring. They are moving their understanding from non-standard to standard units of measurement. They can inconsistently determine weight/mass and liquid measures using ounces, pounds, grams and liters. They can determine equivalent measures of time. Their understanding of digital clocks is stronger than analog. They can read a thermometer. They sometimes confuse the concepts of perimeter and area of straight-sided geometric figures drawn on square grids. They can measure volume by physically counting cubes. When using money, they are inconsistently able to compare units and make change. Some of their estimates are unreasonable.

Third-grade students whose measured performance is below standards can describe, extend and find the missing components of patterns. They can make generalizations from specifics. Sometimes, when they are given a specific number story, they can write a number sentence using variables, equality and inequality notation. They can sometimes solve a number sentence that includes a variable. On a Cartesian Coordinate Graph, they can locate a point given the coordinates and can name the coordinates of a given point.

Third-grade students whose measured performance is below standards can with few exceptions identify points, lines, circles, simple polygons and the three-dimensional shapes of cone, cube, cylinder, sphere and pyramid and their properties. This includes congruency and the number of sides, faces and vertices. Given several drawings, they can inconsistently identify the figure with the correct line of symmetry drawn. They are able to sort and classify using the geometric vocabulary of circle, square, rectangle, triangle, pentagon, hexagon and octagon.

Third-grade students whose measured performance is below standards can read tallied data, tables, charts, Venn diagrams, bar, picture and circle graphs. They are beginning to understand how to compute the probability of simple events. They can list the outcomes of a simple one-stage event but cannot consistently count the total population. They can use "likely," "unlikely" and "impossible" to describe possible outcomes. They are beginning to use the language of "two out of three" to describe the probability of an event.

ACADEMIC WARNING

Third-grade students whose measured performance indicates academic warning can count but have little understanding of place value. They can follow procedures with little understanding of the process. They are unaware when their answer is unreasonable. They know some basic addition facts and fewer subtraction facts. They can use concrete materials to solve basic addition and subtraction facts. They can order small numbers. They have an understanding of 1/2 and what it means to share fairly.

Third-grade students whose measured performance indicates academic warning can physically compare objects to determine which is heavier, longer or warmer. They can read digital clocks and calendars. They are more consistently accurate with nonstandard units of measurement than standard units. They can name some coins and know they can use them in exchange for services or goods.

Third-grade students whose measured performance indicates academic warning can tell what comes next in a simple, repeating pattern.

Third-grade students whose measured performance indicates academic warning can identify circles, squares, triangles and rectangles. They can count the number of sides on two-dimensional figures and count the number of vertices but do not use the term "vertices" or many other geometric terms.

They can read simple picture graphs. They are able to read graphs using concrete materials. They can sort real objects into categories. They are beginning to demonstrate an understanding that the larger area on a spinner seems to affect the outcome.