

NAME \_\_\_\_\_

DATE \_\_\_\_\_

# Third Grade Math Skills & Concepts Student Report

## Explanation of Color Coding

Pink: Just beginning to utilize this skill or concept

Green: Developing an understanding of this skill or concept

Yellow: Proficient with this skill or concept

EARLY THIRD GRADE	LATE THIRD GRADE	BEYOND THIRD GRADE
<b>Numbers &amp; Numeration</b>		
Reads, writes, and understands numbers to 999.	Reads, writes, understands, and compares numbers to 10,000.	Reads, writes, understands, and compares numbers to 99,999.
Recognizes concrete models and visual representations of common fractions (e.g., $\frac{1}{2}$ , $\frac{1}{3}$ , $\frac{1}{4}$ ).	Understands, models, reads, and writes common fractions (e.g., $\frac{1}{2}$ , $\frac{1}{3}$ , $\frac{1}{4}$ , $\frac{1}{8}$ , $\frac{1}{16}$ ) using concrete models and visual representations.	Explores equivalent fractions and uses equivalence to compare fractions. (e.g., $\frac{3}{6} = \frac{1}{2}$ , so $\frac{2}{6}$ is less than $\frac{1}{2}$ .) Recognizes equivalent forms of common fractions and decimals to hundredths ( $.75 = \frac{3}{4}$ ).
<b>Basic Facts</b>		
Quickly solves addition and subtraction combinations to 20, using a variety of strategies.	Demonstrates computational fluency with basic addition and subtraction facts.	Demonstrates computational fluency with basic addition and subtraction facts.
Develops a variety of strategies to figure out multiplication facts up to $5 \times 5$ .	Uses a variety of strategies to figure out multiplication facts to $5 \times 10$ . Demonstrates an understanding of division as fair shares and repeated subtraction and as the inverse operation of multiplication.	Knows and fluently uses multiplication strategies for facts to $10 \times 10$ . Develops strategies for solving division facts.
<b>Multi-Digit Computation</b>		
Uses models, mental, and/or paper-pencil methods for adding any 2 double-digit numbers with and without regrouping.	Adds 2- and 3-digit numbers with and without regrouping using efficient mental and/or paper-pencil strategies.	Adds 3- and 4-digit numbers with and without regrouping using a variety of efficient paper-pencil and mental strategies. Uses efficient, flexible, and accurate derived facts strategies.
Uses models, mental, and/or paper-pencil methods for subtracting any 2 double-digit numbers with and without regrouping.	Subtracts 2- and 3-digit numbers with and without regrouping using efficient mental and/or paper-pencil strategies.	Subtracts 3- and 4-digit numbers with and without regrouping using a variety of efficient paper-pencil and mental strategies. Uses efficient, flexible, and accurate derived facts strategies.
<b>Story Problems</b>		
Poses and solves addition, subtraction, multiplication, and division story problems.	Poses and solves multi-step story problems involving addition, subtraction, multiplication, and division. Develops a variety of efficient paper-pencil and mental strategies for solving such problems.	Poses and solves multi-step story problems involving addition, subtraction, multiplication, and division. Uses a variety of efficient paper-pencil and mental strategies for solving such problems.
<b>Algebraic Thinking</b>		
Creates, labels, and extends both growing and repeating patterns using objects, numbers, and graphic representations.	Describes, extends, and makes generalizations about numeric and geometric patterns. Makes predictions and solves problems. Determines one quantity when given the other based on a simple relationship (e.g., using a T-chart to determine the number of wheels when given the total number of cars).	Extends, represents, and analyzes patterns and functions using words, tables, or number sentences.

## Third Grade Math Skills &amp; Concepts Student Report (cont.)

EARLY THIRD GRADE	LATE THIRD GRADE	BEYOND THIRD GRADE
<b>Geometry</b>		
Classifies 2- and 3-dimensional shapes by number of corners and sides, edges, faces, and vertices.	Recognizes, describes, compares, and draws 2- and 3-dimensional shapes according to attributes and begins to analyze the properties. (e.g., A square is a rectangle with right angles and equal sides and a cube is a rectangular prism with equal faces.)  Develops an understanding of such geometric terms as face, edge, point, vertex, parallel, congruence, similarity, and right, obtuse, and acute angles.	Describes, compares, and analyzes 2- and 3-dimensional shapes according to attributes. Uses an understanding of such geometric terms as face, edge, point, vertex, parallel, congruence, similarity, and right, obtuse, and acute angles accurately.
Combines several different 2- and 3-dimensional shapes to create a single new shape. (Can use a combination of squares, triangles, and parallelograms to create a square or 2 triangular prisms to make a rectangular prism.)	Solves spatial problems by showing relationships between and among figures (e.g., using congruence and similarity, and using transformations including slides, flips, and rotations).	Uses line and rotational symmetry to predict and describe the results of performing reflections (flips), rotations (turns), and translations (slides). Combines 3-dimensional solids to make new shapes based on 2-dimensional representations.
<b>Measurement</b>		
Measures length in standard U.S. customary and metric units. Measures weight and capacity in non-standard units.	Reasonably estimates and measures length, weight, capacity, and temperature in standard U.S. customary and metric units. Develops referents for U.S. customary and metric units of length, weight, and capacity measure. Selects the tool and unit that is most appropriate.	Estimates and measures length, weight, capacity, and temperature in standard U.S. customary and metric units, using a referent for accuracy and a fraction when appropriate.
Developing strategies to determine the area and perimeter of a rectangle in non-standard units.	Uses strategies to determine the area and perimeter of a rectangle in non-standard units.	Uses efficient strategies to compute the area and perimeter of a rectangle in standard units. Explores estimating and determining the surface area and volume of rectangular prisms.
<b>Telling Time &amp; Elapsed Time</b>		
Tells time on an analog clock to the nearest 5 minutes.	Tells time to the minute on analog and digital clocks, and determines elapsed time in minutes and hours.	Determines elapsed time requiring unit conversions (minutes to hours, weeks to months).
<b>Money</b>		
Counts mixed collections of quarters, dimes, nickels, and pennies to at least \$1.00.	Counts sums of money to \$10.00 and makes change from \$5.00.	Adds and subtracts money amounts using decimals to the hundredths accurately.
<b>Data Analysis</b>		
Creates, reads, and interprets a variety of picture, symbolic, and bar graphs.	Collects, organizes, and displays information in line plots, bar graphs, and/or pictographs and labels columns, rows, and titles appropriately. Makes predictions and draws conclusions and inferences from data in many forms, including graphs in which each division stands for more than one item.	Reads, interprets, and constructs properly labeled tables, bar graphs, line plots, pictographs, and circle graphs. Is able to use these displays to draw, support, and communicate conclusions.  Explores averaging problems by leveling off columns of cubes to make equal groups.
<b>Probability</b>		
Explores probability in the context of spinners, dice, and card games.	Predicts the likelihood of an outcome of a simple investigation. Records data from probability experiments and compares outcomes when an event is repeated many times.	Predicts and represents all possible outcomes in an organized way and expresses the outcome numerically using both whole numbers and fractions (3 out of 4, $\frac{3}{4}$ ). Compares the probability with the actual results.



