Grade 3 - Math

Standard 1: Number Sense
Students understand the relationships among numbers, quantities, and place value in <u>whole numbers</u> up to 1,000. They understand the relationship among whole numbers, simple fractions, and decimals.

3.1.1
Count, read, and write whole numbers up to 1,000.

3.1.2
Identify and interpret place value in whole numbers up to 1,000.

3.1.3
Use words, models, and expanded form to represent numbers up to 1,000.

3.1.4
Identify any number up to 1,000 in various combinations of hundreds, tens, and ones.

3.1.5
Compare whole numbers up to 1,000 and arrange them in numerical order.

3.1.6
Round numbers less than 1,000 to the nearest ten and the nearest hundred.

3.1.7
Identify odd and even numbers up to 1,000 and describe their characteristics.

3.1.8
Show <u>equivalent fractions</u> using equal parts.

3.1.9
Identify and use correct names for numerators and denominators.

3.1.10
Given a pair of fractions, decide which is larger or smaller by using objects or pictures.

3.1.11
Given a <u>set</u> of objects or a picture, name and write a decimal to represent tenths and hundredths.

3.1.12
Given a decimal for tenths, show it as a fraction using a place-value model.

3.1.13
Interpret data displayed in a circle graph and answer questions about the situation.

3.1.14
Identify whether everyday events are certain, likely, unlikely, or impossible.

3.1.15
Record the possible outcomes for a simple probability experiment.

Standard 2: Computation
Students solve problems involving addition and subtraction of whole numbers. They model and solve simple problems involving multiplication and division.

3.2.1
Add and subtract whole numbers up to 1,000 with or without regrouping, using relevant properties of the number system.

3.2.2
Represent the concept of multiplication as repeated addition.

3.2.3
Represent the concept of division as repeated subtraction, equal sharing, and forming equal groups.

3.2.4
Know and use the inverse relationship between multiplication and division facts, such as 6 x 7 = 42, 42 / 7 = 6, 7 x 6 = 42, 42 / 6 = 7.

3.2.5
Show mastery of multiplication facts for 2, 5, and 10.

3.2.6
Add and subtract simple fractions with the same denominator.

3.2.7
Use estimation to decide whether answers are reasonable in addition and subtraction problems.

3.2.8
Use mental arithmetic to add or subtract with numbers less than 100.

Standard 3: Algebra and Functions
Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number and functional relationships.

3.3.1
Represent relationships of quantities in the form of a numeric expression or equation.

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3.3.2
Solve problems involving numeric equations.

3.3.3
Choose appropriate symbols for operations and relations to make a number sentence true.

3.3.4
Understand and use the <u>commutative</u> and <u>associative</u> properties of multiplication.

3.3.5
Create, describe, and extend number patterns using multiplication.

3.3.6
Solve simple problems involving a functional relationship between two quantities.

3.3.7
Plot and label whole numbers on a number line up to 10.

Standard 4: Geometry
Students describe and compare the attributes of plane and solid geometric shapes and use their understanding to show relationships and solve problems.

3.4.1
Identify <u>quadrilaterals</u> as four-sided shapes.

3.4.2
Identify right angles in shapes and objects and decide whether other angles are greater or less than a right angle.

3.4.3
Identify, describe, and classify cube, <u>sphere</u>, <u>prism</u>, pyramid, cone, and cylinder.

3.4.4
Identify common solid objects that are the parts needed to make a more complex solid object.

3.4.5
Draw a shape that is <u>congruent</u> to another shape.

3.4.6
Use the terms *point*, *line*, and *line segment* in describing two-dimensional shapes.

3.4.7
Draw line segments and lines.

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3.4.8
Identify and draw lines of symmetry in geometric shapes (by hand or using technology).

3.4.9
Sketch the mirror image reflections of shapes.

3.4.10
Recognize geometric shapes and their properties in the environment and specify their locations.

Standard 5: Measurement
Students choose and use appropriate units and measurement tools for length, capacity, weight, temperature, time, and money.

3.5.1
Measure line segments to the nearest half-inch.

3.5.2
Add units of length that may require regrouping of inches to feet or centimeters to meters.

3.5.3
Find the perimeter of a <u>polygon</u>.

3.5.4
Estimate or find the area of shapes by covering them with squares.

3.5.5
Estimate or find the volumes of objects by counting the number of cubes that would fill them.

3.5.6
Estimate and measure capacity using quarts, gallons, and liters.

3.5.7
Estimate and measure weight using pounds and kilograms.

3.5.8
Compare temperatures in Celsius and Fahrenheit.

3.5.9
Tell time to the nearest minute and find how much time has elapsed.

3.5.10
Find the value of any collection of coins and bills. Write amounts less than a dollar using the ¢ symbol and write larger amounts in decimal notation using the $ symbol.

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3.5.11
Use play or real money to decide whether there is enough money to make a purchase.

3.5.12
Carry out simple unit conversions within a measurement system (e.g., centimeters to meters, hours to minutes).

Standard 6: Problem Solving
Students make decisions about how to approach problems and communicate their ideas.

3.6.1
Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.

3.6.2
Decide when and how to break a problem into simpler parts.

3.6.3
Apply strategies and results from simpler problems to solve more complex problems.

3.6.4
Express solutions clearly and logically by using the appropriate mathematical terms and notation. Support solutions with evidence in both verbal and symbolic work.

3.6.5
Recognize the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.

3.6.6
Know and use strategies for estimating results of whole-number addition and subtraction.

3.6.7
Make precise calculations and check the validity of the results in the context of the problem.

3.6.8
Decide whether a solution is reasonable in the context of the original situation.

3.6.9
Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems.