

Mary Queen of Peace Curriculum--Math 4th Grade

High Priority Standards: (State, National, CCSS)

Operations and Algebraic Thinking

Learning Goal

Students will use the four operations with whole numbers to solve problems.

Learning Targets

1. Apply understanding of addition and subtraction facts to problem solving.
2. Apply understanding of models for multiplication and division.
 - Recall multiplication and related division facts.
 - Develop fluency in multiplying multi-digit numbers.
 - Solve multi-digit multiplication and division problems, with and without remainders.
 - Represent division as the inverse of multiplication.
3. Solve multi-step word problems using addition, subtraction, multiplication, and division. Apply problem solving skills using a variable with all four operations of math.
4. Estimation and Mental Math
 - Use mental math and estimation strategies to find sums, differences, products, and quotients.

Learning Goal

Students will Generate and Analyze Patterns.

Learning Targets

1. Identify, describe, and extend numeric and nonnumeric patterns.
2. Use a rule to describe a sequence of numbers or objects.

Number and Operations in Base Ten

Learning Goal

Students will generalize place value understanding for multi-digit whole numbers.

Learning Goal

Students will use place value understanding and properties of operations to perform multi-digit arithmetic.

Learning Targets

1. Understands the value and place of digits in a number up to one million.
2. Expresses numbers to 100,000 in standard, expanded, and word forms.
3. Compare and order whole numbers to 100,000.
4. Compare up to 3-digit numbers using $>$, $<$, and $=$ symbols to record the results of comparisons.
5. Use place value understanding to round multi-digit whole numbers to any place.

1. Fluently add and subtract multi-digit whole numbers.
2. Multiply a whole number up to 4 digits with understanding of place value and the properties of operations.
3. Divide whole numbers, with and without remainders, up to 4 digits, using strategies based on place value and properties of operations.

Number and Operations-Fractions

Learning Goal

Students will extend their understanding of fraction equivalence and ordering

Students will build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Students will understand decimal notation for fractions, and compare decimal fractions.

Learning Targets

1. Generate and identify equivalent fractions, with the attention to how the number and size of the parts differ between two fractions.
 2. Compare two fractions with different numerators and different denominators, by creating common denominators.
 3. Record the results of the comparisons with symbols $>$, $<$, $=$.
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1. Adding and subtracting fractions with the understanding of the value of a numerator (part) and the value of a denominator (whole).
 2. Decompose a fraction into a sum of fractions with the same denominator in more than one way. ($\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$)
 3. Add and subtract mixed numbers with like denominators, by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
 4. Solve word problems involving addition and subtraction of fractions.
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1. Compare decimals using $>$, $<$, $=$.
 2. Order decimals based on their value (greatest to least, or least to greatest)
 3. Round and estimate decimals.
 4. Add and subtract decimals.
 5. Divide with money.
 6. Identify equivalent fractions and decimals.

Measurement and Data

Learning Goal

Students will Solve problems involving measurement and conversion of measurement from a larger unit to a smaller unit.

Students will Represent and interpret data.

Students will understand concepts of angles and measure angles.

1. Know how to measure standard units of length and compute units of capacity.
2. Measure in metric units and compute units of capacity.
3. Calculate and record measurement equivalents.
4. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals.
5. Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

1. Represent and interpret data by solving problems involving addition and subtraction of fractions by using information presented in line plots.

1. Recognize different angles and understand concepts of angle measurement.
2. Measure angles in whole number degrees
3. Solve addition and subtraction problems to find unknown angles on a diagram.

Geometry

Learning Goal

Students will Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

1. Draw and identify points, lines, line segments, rays, angles, perpendicular lines, and parallel lines.
2. Draw perpendicular and parallel lines.
3. Identify obtuse, acute, right, and straight angles.
4. Identify line-symmetric figures and draw lines of symmetry.