

# Mary Queen of Peace Curriculum--Math 3rd 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.
  - Introduce 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.
5. Write multiplication and division number sentences
6. Determine the missing parts in a number sentence
7. Understand equality and inequality

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 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 1,000.
  4. Compare up to 4-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.

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

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

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## Number and Operations-Fractions

Learning Goal	Learning Targets
<p>Students will understand the meanings and uses of fractions</p>	<ol style="list-style-type: none"><li>1. Understand fractions as part of a set and part of a whole</li><li>2. Understand that the size of a fractional part is relative to the size of the whole</li><li>3. Comparing and ordering fractions using models and number lines</li><li>4. Identify equivalent fractions through the use of models, multiplication, division and number lines</li><li>5. Add and subtract fractions with like denominators</li><li>6. Introduce mixed numbers</li></ol>

Students will understand the meanings and uses of fractions

### Learning Targets

1. Understand fractions as part of a set and part of a whole
2. Understand that the size of a fractional part is relative to the size of the whole
3. Comparing and ordering fractions using models and number lines
4. Identify equivalent fractions through the use of models, multiplication, division and number lines
5. Add and subtract fractions with like denominators
6. Introduce mixed numbers

# 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 be able to accurately measure time and temperature

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
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. Read time on analog and digital clocks
2. Tell time to the nearest minute
3. Convert between hours and minutes
4. Determine elapsed time
5. Read a Fahrenheit and Celsius thermometer
6. Choose the appropriate tool and unit to measure temperature
7. Use referents to estimate temperature

Students will collect, classify, organize, represent, interpret and analyze data

1. Collect and organize data in bar graphs, circle graphs, pictographs and line plots
2. Interpret picture and bar graphs with scales
3. Use bar graphs, pictographs, and line plots to solve real world problems

## Geometry

Learning Goal

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

Students will be able to determine length, distance, perimeter and area

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.
  5. Describe, analyze, compare and classify two dimensional shapes by their sides and angles
  6. Classify and sort polygons and quadrilaterals by attributes and properties
  7. Use attributes and properties to solve problems
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1. Select appropriate units and tools to estimate and measure lengths
  2. Measure length to the nearest  $\frac{1}{4}$  inch
  3. Use referents to estimate distance
  4. Measure perimeter of plane figures
  5. Find and compare the area of plane figures and different square units

Students will be able to determine surface area and volume

Students will be able to determine the weight and mass of an object

Students will be able to determine congruence and symmetry, perform transformations and locate coordinates

6. Compare the area and perimeter of plane figures
7. Find the area of rectangles and composite figures

1. estimate and measure capacity in liters and milliliters
2. Convert among metric units of capacity
3. Select the appropriate tools and units to estimate and measure volume in cubic units
4. Relate the units of customary capacity to one another
5. Decompose solid figures to find the surface area

1. Select appropriate units and tools to estimate and measure weight
2. Use referents to measure weight
3. Estimate and find masses of objects
4. Convert among units of masses

1. Identify symmetrical figures and one line of symmetry
2. Solve problems involving congruency
3. Identify pairs of shapes that show a flip, slide and turn