

**Department:** Math

**Course Name:** Fourth Grade Mathematics

**Course Description:**

The fourth-grade math curriculum challenges the student to extend their basic knowledge of computation and number sense in order to master advanced concepts and applications. The student will begin the year with a review of whole number representations, place value, comparing, ordering, and rounding. The student will advance their fluidity of computation through addition, subtraction, multiplication, and division of larger whole numbers, fractions, and decimals. The student will use prime factorization as a means of mastering skills necessary for manipulation of fractions, decimals, and percentages. Measurement concepts and computation will be explored in both the metric and customary units, with discussion of how to use the system that is most appropriate. Basic statistics will be introduced through the concepts and computation of mean, median, mode, and range, and further elaborated upon through probability. The student will use the statistical data to create and interpret graphs and articulate data analysis. The student will finally explore higher level geometric concepts through classification of polygons, rays, lines, and line segments, as well as applying formulas for area, perimeter, volume, and circumference. A spiral review of prior grade level curriculum will be ongoing throughout the year.

**Content:**

Number sense  
Place value  
Estimation  
Addition and subtraction skills and vocabulary  
Multiplication and division procedures and vocabulary  
Algebraic expressions and theories  
Number theory and averages  
Customary and metric units and measurement  
Methods to gather, analyze, and graph data  
Basic geometric concepts  
Fractions  
Basic probability concepts  
Problem solving skills  
Multistep problem solving  
Data analysis  
Working backwards

**Skills:**

Write numbers in standard, expanded, word, and short word forms  
Identify the place and value of digits up to hundred millions  
Add and subtract up to six-digit numbers  
Multiply up to five-digit by two-digit numbers  
Multiply patterns in multiples of ten  
Divide larger numbers with a double digit divisor  
Understand divisibility  
Estimate sums, differences, products, and quotients  
Identify the multiples and factors of numbers  
Identify prime and composite numbers  
Find averages

Measure using customary and metric units  
Compare units of measurement  
Calculate elapsed time  
Read Fahrenheit and Celsius thermometers  
Graph data  
Identify the perimeter and area of basic shapes  
Identify points, lines, line segments, rays, and angles  
Identify rotations, reflections, and translations  
Identify lines of symmetry  
Identify equivalent fractions  
Reduce fractions to simplest form  
Compare and order fractions  
Write fractions as mixed numbers or improper fractions  
Identify a fraction of a number  
Add and subtract fractions  
View failure as an opportunity to learn, and acknowledge that innovation involves small successes and frequent mistakes  
Use trial and error to find solutions  
Master higher level mathematics through word problems  
Apply math skills to solve real world problems

**Text and Materials:**

Carter, Cuevas, Day, et.al., My Math (McGraw-Hill, 2018)

**Methods of Instruction:**

Lecture  
iPads  
Review games  
Interactive math notebooks  
Word problem notebooks

**Methods of Evaluation:**

Tests  
Quizzes  
Homework  
Classwork