

**Department:** Math

**Course Name:** Fourth Grade Mathematics

**Course Description:**

The fourth grade math curriculum encourages students to take what they already know about numbers, multiplication, and division, and apply it to higher level thinking. Students focus on exponents, place value through billions, and comparing, ordering, and rounding whole numbers and money. This class also teaches students how to add and subtract greater numbers, multiply and divide by two-digit numbers, and about number theory and averages. Units of measurement are stressed, both customary and metric, along with time and temperature. Fractions and geometric concepts are introduced. Collecting, analyzing, and graphing data are practiced 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:**

Greenes, Larson, Leiva, et.al., Math (Houghton Mifflin, 2015)

**Methods of Instruction:**

Lecture  
iPads  
Review games  
Interactive math notebooks  
Word problem notebooks

**Methods of Evaluation:**

Tests  
Quizzes  
Homework  
Class work

