

GRADE 5 MATHEMATICS

The Fifth Grade Math Program is designed with the goal that students would learn and remember various computation and problem solving skills that build a strong foundation in mathematics. Our program uses a unit approach, provides continuous review, practice and enrichment..

Place Value/Addition and Subtraction

Students will:

- Read, write, and identify place value in whole numbers and decimals
- Round, compare, and order whole numbers and decimals
- **Estimate sums and differences**
- Add and subtract whole numbers
- Solve addition and subtraction equations using mental math
- Solve problems using skills and strategies

Multiplication, Division and Algebra

Students will:

- Use properties to evaluate algebraic expressions
- Estimate products and quotients
- Multiply and divide by one and two digit numbers
- Use the correct order of operations
- Solve problems using skills and strategies

Measurement/ Data and Graphing

Students will:

- Use customary and metric units of length, capacity and weight/mass
- Represent and interpret data in graphs
- Collect and organize data in plots and graphs
- Find the mean , median, mode, and range of a set of data
- Draw conclusions and make predictions from data displays
- Solve problems using skills and strategies

Addition and Subtraction of Fractions and Decimals

Students will:

- Identify prime and composite numbers and write the prime factorization of numbers
- Find the common factors, GCF, common multiples, and LCM
- Find equivalent fractions and write fractions in simplest form.
- Relate and compare fractions, mixed numbers, and decimals
- Estimate fraction and decimal sums and differences
- Add and subtract fractions, mixed numbers, and decimals
- Solve problems using skills and strategies

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Multiplication and Division of Fractions and Decimals

Students will:

- Multiply and divide with fractions and mixed numbers
- Estimate decimal products and quotients
- Multiply and divide with decimals
- Solve problems using skills and strategies

Geometry and Measurement

Students will:

- Identify and classify basic two and three dimensional geometric figures and their parts
- Identify congruent figures and figures with line and rotational symmetry
- Identify transformations as reflections, translations or rotations
- Find the perimeter and area of polygons and irregular figures
- Use pi to find the circumference of a circle
- Find surface area and volume of solid figures
- Solve problems using skills and strategies

Ratio, Proportion, Percent, and Probability

Students will:

- Read, write and use ratios, equivalent ratios, and rates
- Identify proportions and use them to solve problems including similar figures and scale drawings
- Use ratios to write percents; relate and compare percents, decimals, fractions, and mixed numbers
- Find a percent of a number
- Find the theoretical or experimental probability of single and compound events
- Solve problems using skills and strategies

Algebra, Integers and Coordinating Graphing

Students will:

- Write and solve equations
- Use functions and function tables to solve equations
- Compare and order integers, and find the absolute value of integers
- Add and subtract integers
- Graph ordered pairs in the four quadrants of the coordinate plane
- Identify/describe transformations on coordinate planes
- Solve problems using skills and strategies
- Read and write lengths (customary and metric)
- Convert/simplify units of length, weight, mass, and liquid measures
- Solve problems using the directions of a compass
- Solve word problems involving addition, subtraction, multiplication and division

Materials

- Houghton Mifflin Math 2007 edition
- Houghton Mifflin Unit Resources
- Houghton Mifflin transparencies
- Houghton Mifflin manipulatives
- Teacher supplied manipulatives
- Calculators
- Math Games

Instruction

These topics are presented through various methods and strategies such as...

- Whole class instruction
- Small group instruction
- Use of manipulatives
- Drawing or acting out the problems
- Writing and practicing various algorithms
- Practice exercises
- Enrichment exercises
- Games
- Small, cooperative group work
- Individual instruction
- Written assignments and assessments

Prepared by Mary Margaret Provost