3RD GRADE MATH SCOPE AND SEQUENCE

EARLY FIRST QUARTER

Number, Number Sense and Operations

A. Use place value structure of the base-ten number system to read, write, represent and compare whole numbers and decimals.
G. Model and use commutative and associative properties for addition and multiplication.
H. Use relationships between operations, such as subtraction as the inverse of addition and division as the inverse of multiplication.

Patterns, Functions and Algebra

A. Analyze and extend patterns, and describe the rule in words.

Mathematical Processes

A. Apply and justify the use of a variety of problem solving strategies.
B. Use an organized approach and appropriate strategies to solve multi-step problems.
C. Interpret results in the context of the problem being solved.
D. Use mathematical strategies to solve problems that relate to other curriculum areas and the real world.
E. Link concepts to procedures and to symbolic notation.
F. Recognize relationships among different topics within mathematics.
G. Use reasoning skills to determine and explain the reasonableness of a solution with respect to the problem situation.
H. Recognize basic valid and invalid arguments, and use examples and counter examples, models, number relationships, and logic to support or refute.
I. Represent problem situations in a variety of forms (physical model, diagram, in words or symbols), and recognize when some ways of representing a problem may be more helpful than others.
J. Read, interpret, discuss and write about mathematical ideas and concepts using both everyday and mathematical language.
K. Use mathematical language to explain and justify mathematical ideas, strategies and solutions.

LATE FIRST QUARTER

Number, Number Sense and Operations

C. Represent commonly used fractions and mixed numbers using words and physical models.
F. Count money and make change using both coins and paper bills.
J. Estimate the results of whole number computations using a variety of strategies, and judge the reasonableness.
L. Use a variety of methods and appropriate tools (mental math, paper and pencil, calculators) for computing with whole numbers.

Measurement

E. Tell time to the nearest minute.

Data Analysis and Probability

A. Gather and organize data from surveys and classroom experiments, including data collected over a period of time.
B. Read and interpret tables, charts, graphs (bar, picture, line, line plot), and timelines as sources of information, identify main idea, draw conclusions, and make predictions.

Mathematical Processes

A through K

EARLY SECOND QUARTER

Number, Number Sense and Operations

B. Recognize and generate equivalent representations for whole numbers, fractions and decimals.
C. Represent commonly used fractions and mixed numbers using words and physical models.
D. Use models, points of reference and equivalent forms of commonly used fractions to judge the size of fractions and to compare, describe and order them.

Patterns, Functions and Algebra

B. Use patterns to make predictions, identify relationships, and solve problems.
C. Write and solve open sentences and explain strategies.

Data Analysis and Probability

C. Construct charts, tables and graphs to represent data, including picture graphs, bar graphs, line graphs, line plots and Venn diagrams.

Mathematical Processes

A through K

LATE SECOND QUARTER

Number, Number Sense and Operations

H. Use relationships between operations, such as subtraction as the inverse of addition and division as the inverse of multiplication.
I. Demonstrate fluency in multiplication facts with factors through 10 and corresponding divisions.
K. Analyze and solve multi-step problems involving addition, subtraction, multiplication and division of whole numbers.

Data Analysis and Probability

D. Read, interpret and construct graphs in which icons represent more than a single unit or intervals greater than one; e.g., each _= 10 bicycles or the intervals on an axis are multiples of 10.
E. Describe data using mode, median and range.
F. Conduct a simple probability experiment and draw conclusions about the likelihood of possible outcomes.
G. Identify and represent possible outcomes, such as arrangements of a set of up to four members and possible combinations from several sets, each containing 2 or 3 members.

Mathematical Processes

A through K

3RD GRADE MATH SCOPE AND SEQUENCE

EARLY THIRD QUARTER

Geometry and Spatial Sense

A. Provide rationale for groupings and comparisons of two dimensional figures and three-dimensional objects.
D. Identify and draw right, obtuse, acute and straight angles.
E. Use attributes to describe, classify and sketch plane figures and build solid objects.
G. Find and name locations in coordinate systems.
H. Identify and describe line and rotational symmetry in two-dimensional shapes and designs.

Mathematical Processes

A. Apply and justify the use of a variety of problem solving strategies.
B. Use an organized approach and appropriate strategies to solve multi-step problems.
C. Interpret results in the context of the problem being solved.
D. Use mathematical strategies to solve problems that relate to other curriculum areas and the real world.
E. Link concepts to procedures and to symbolic notation.
F. Recognize relationships among different topics within mathematics.
G. Use reasoning skills to determine and explain the reasonableness of a solution with respect to the problem situation.
H. Recognize basic valid and invalid arguments, and use examples and counter examples, models, number relationships, and logic to support or refute.
I. Represent problem situations in a variety of forms (physical model, diagram, in words or symbols), and recognize when some ways of representing a problem may be more helpful than others.
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K. Use mathematical language to explain and justify mathematical ideas, strategies and solutions.

LATE THIRD QUARTER

Measurement

A. Select appropriate units for perimeter, area, weight, volume (capacity), time and temperature, using:
- objects of uniform size;
- U.S. customary units; e.g., mile, square inch, cubic inch, second, degree Fahrenheit, and other units as appropriate;
- metric units; e.g., millimeter, kilometer, square centimeter, kilogram, cubic centimeter, degree Celsius, and other units as appropriate.

D. Identify appropriate tools and apply counting techniques for measuring side lengths, perimeter and area of squares, rectangles, and simple irregular two-dimensional shapes, volume of rectangular prisms, and time and temperature.

Geometry and Spatial Sense

I. Describe, identify and model reflections, rotations and translations, using physical materials.
J. Describe a motion or series of transformations that show two shapes are congruent.

Patterns, Functions and Algebra

D. Represent an unknown quantity as a variable using a symbol, including letters.
E. Use variables to create and solve equations representing problem situations.

Mathematical Processes

A through K

EARLY FOURTH QUARTER

Measurement

C. Develop common referents for units of measure for length, weight, volume (capacity) and time to make comparisons and estimates.

Patterns, Functions and Algebra

F. Construct and use a table of values to solve problems associated with mathematical relationships.

Mathematical Processes

A. Apply and justify the use of a variety of problem solving strategies.
B. Use an organized approach and appropriate strategies to solve multi-step problems.
C. Interpret results in the context of the problem being solved.
D. Use mathematical strategies to solve problems that relate to other curriculum areas and the real world.
E. Link concepts to procedures and to symbolic notation.
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K. Use mathematical language to explain and justify mathematical ideas, strategies and solutions.

LATERFOURTH QUARTER

Patterns, Functions and Algebra

G. Describe how a change in one variable affects the value of a related variable.

Mathematical Processes

A. Apply and justify the use of a variety of problem solving strategies.
B. Use an organized approach and appropriate strategies to solve multi-step problems.
C. Interpret results in the context of the problem being solved.
D. Use mathematical strategies to solve problems that relate to other curriculum areas and the real world.
E. Link concepts to procedures and to symbolic notation.
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