

Students will be able to: NUMBER SENSE AND OPERATIONS

- Maintain mastery of addition and subtraction facts to twenty.
- Understand the value of the digits in the base ten number system by reading, writing, comparing, ordering and interpreting whole numbers to one hundred thousand.
- Demonstrate and represent an understanding of fractions as parts of unit wholes, as parts of a group. Also, be able to order fractions on a number line.
- Select, use and explain models to relate common fractions ( $1/2$ ,  $1/3$ ,  $1/4$ ) with visual models or concrete materials and expose students to equivalent fractions and mixed numbers.
- Recognize classes (*in particular, odds, evens; factors or multiples of a given number*) to which a number may belong, and identify the numbers in those classes. Use these in the solution of problems.
- Select, use, and explain various meanings and models of multiplication and division of whole numbers through  $10 \times 10$  and how multiplication and division relate to each other.
- Introduce the commutative and identity properties of operations for addition and multiplication on whole numbers in problems situations.
- Select and use appropriate operations accurately (*addition, subtraction, multiplication, division*) to solve problems, including those involving money.
- Demonstrate mastery of multiplication facts through the ten's table and related division facts.
- Add and subtract up to four numbers and multiply up to two digit numbers by a one digit number accurately and efficiently.
- Divide up to a two-digit whole number with a single-digit divisor with or without remainders.
- Select and use a variety of strategies (*rounding up to one hundred, regrouping*) to estimate quantities, measures, and the results of whole-number computations (*addition, subtraction, and multiplication*) up to three-digit whole numbers and amounts of money up to \$1000, and to judge the reasonableness of the answer.
- Represent, order, and compare numbers through 9,999 using expanded notation and written out in words.
- Round whole numbers through 1,000 to the nearest 10, 100, and 1,000.
- Use concrete objects and visual models to add and subtract common fractions (halves, thirds, fourths, sixths, and eights) with like denominators.

Students will be able to: PATTERNS, RELATIONS AND ALGEBRA

- Skip count by 2, 3, 4, 5, and 10 accurately and efficiently.
- Create, describe, extend, and explain symbolic (geometric) patterns for addition, subtraction, and multiplication patterns like 3, 30, 300, 3000, ...
- Determine which symbol ( $<$ ,  $>$ , or  $=$ ) is appropriate for a given number sentence. ( $7 \times 8 ? 49 + 6$ )
- Determine values of variables in simple equations ( $2 + \square = 9$ ).
- Use pictures models, tables, charts, graphs, words, number sentences, and mathematical notations to interpret mathematical relationships.
- Solve problems involving proportional relationships, including unit pricing and map interpretation.
- Use input/output tables to see changes in variables.
- Write number sentences using  $+$ ,  $-$ ,  $\times$ ,  $\div$ ,  $<$ ,  $=$ , and/or  $>$  to represent mathematical relationships in everyday situations.

Students will be able to:

GEOMETRY

- Compare and analyze attributes of two-dimensional geometric shapes.
- Describe, model, draw, compare, combine, and classify two-dimensional shapes.
- Identify and describe simple three-dimensional shapes. (*cubes, spheres, and pyramids*)
- Identify angles as acute (*less than right*), obtuse (*greater than right*), or right.
- Identify and draw intersecting, parallel, and perpendicular lines.
- Use ordered pairs of whole numbers and/or letters to locate and identify points on a grid.
- Identify reflections, rotations, and translations to determine congruency.
- Identify and draw lines of symmetry in two dimensional shapes.

Students will be able to:

MEASUREMENT

- Identify an understanding of such attributes as length, area, weight, and volume.
- Perform simple unit conversions within a system of measurement. (*hours to minutes, cents to dollars*)
- Identify time to the minute on analog and digital clocks using a.m. and p.m.
- Compute elapsed time, using a clock for times less than one hour and using a calendar.
- Estimate and find the area and perimeter of a rectangle using diagrams, models, and grids, or by measuring.
- Identify and use appropriate metric and English units and tools to estimate, measure, and solve problems involving length (*to nearest inch*), area, volume, weight, time, angle size, and temperature.
- Select the appropriate type of unit for measuring each attribute using both the US Customary (*English*) and metric systems.

Students will be able to:

DATA ANALYSIS, STATISTICS AND PROBABILITY

- Collect and organize data.
- Match lists, tables, and graphs with sets of data.
- Interpret data on a graph.
- Predict trends and draw conclusions from graphs, line plots, tables and tallies.
- Represent possible outcome for simple probability.
- List, count, and create an organized list of possible outcomes from two sets.
- Classify outcomes as likely and unlikely by conducting experiments using concrete objects.
- Construct data sets in the forms of tables, line plots, pictographs, tallies, and bar graphs.