

Grade One

Possible topics to be presented:

All skills are taught and applied, skills indicated with an * are skills that to be reinforced and applied

I. Whole Number Concepts and Operations

A. Numeration

1. Meaning of numbers
2. Reading and writing of numbers
3. Place value
4. Ordinal numbers
5. Comparing and ordering

B. Number Theory

1. Even and odd numbers

C. Addition

1. Meaning of addition
2. Related to subtraction
3. Basic facts and fact strategies
4. Properties
5. Three or more addends
6. Adding 2-digit numbers
7. Addition expressions/sentences/equations
8. Estimation and mental math
9. Problem solving

D. Subtraction

1. Meaning of subtraction
2. Related to addition
3. Basic facts and fact strategies
4. Properties
5. Subtracting 2-digit numbers
6. Subtraction expressions/sentences/equations
7. Estimation and mental math
8. Problem solving

II. Fraction Concepts and Operations

A. Concepts

1. Part of a whole/part of a set
2. Rounding/estimating

III. Number Sense, Estimation, and Mental Math

A. Number Sense

1. Meaning of whole numbers
2. Fractions
3. Number patterns
4. Number relationships
5. Relative magnitude of numbers

B. Estimation Strategies

1. Estimating quantities and measures

C. Mental Math

1. Basic-fact strategies: add and subtract
 - a. count on./count back
 - b. make ten
2. Basic-fact strategies: multiply and divide
 - a. skip count
3. Mental-computation strategies
 - a. use properties and patterns

IV. Mathematical Processes

A. Problem Solving

1. Analyze Word Problems
 - a. choose an operations
 - b. too much or too little information
2. Analyze Strategies
 - a. use objects/act it out
 - b. draw or use a picture/diagram
 - c. guess and check
 - d. look for a pattern
 - e. make an organized list
 - f. make a table
 - g. use logical reasoning
 - h. choose/compare strategies
3. Decision Making
 - a. plan an event, make a choice, etc.
4. Problem-Solving Guide/Checklist
 - a. Look back: check reasonableness of answer

B. Reasoning

1. Critical Thinking, Logical Reasoning
 - a. classifying/sorting
 - b. comparing/contrasting
 - c. finding/extending/using patterns
 - d. making generalizations
 - e. drawing conclusions
 - f. making/testing conjectures
 - g. explaining/justifying answers
2. Visual and Creative Thinking
 - a. visual patterns
 - b. spatial reasoning
 - c. generate problems
 - d. develop alternative ways to solve problems

C. Connections

1. Curriculum Connections
 - a. social studies/history/geography*
 - b. health/physical education*
 - c. science*
 - d. music*
 - e. reading/language/literature*
 - f. art*
2. Math Strand Connections
 - a. patterns
 - b. estimation and mental math
 - c. algebra readiness
 - d. geometry
 - e. using/collecting data
3. Real World Connections
 - a. student's daily life*
 - b. consumer*
 - c. multicultural connections*

D. Communication

1. Reading for math/reading assists
2. Write about it/journal
3. Talk about it/share

4. Working in groups

V. Geometry

A. Plane and Solid Shapes

1. Identify plane figures
2. Identify solid shapes
3. Relate plane figures to solid figures
4. Symmetry
5. Circles and parts of circles
6. Draw/construct/build
7. Visual thinking

B. Classification

1. Congruent figures
2. Triangles
3. Quadrilaterals
4. Polyhedrons/solid shapes

VI. Patterns, Relationships, and Algebraic Thinking

A. Patterns

1. With objects/geometric figures
2. With numbers
3. Skip counting
4. Used to make predictions
5. Logical reasoning

B. Relationships

1. Venn diagrams
2. Commutative and associative properties
3. Zero and identity properties

C. Algebraic Thinking

1. Expressions, Equations, Inequalities
 - a. missing numbers and number sentences

VII. Measurement, Time, and Money

A. Measurement

1. Comparing lengths and sizes
2. Nonstandard units
3. Length, customary
4. Length, metric
5. Length, estimating
6. Capacity, customary
7. Capacity, metric

8. Weight, customary
9. Weight, customary
10. Mass, metric
11. Weight/mass, estimating
12. Temperature

B. Time

1. Nearest hour/half hour
2. Estimating time
3. Elapsed time
4. Calendar

C. Money

1. Identify coins and bills
2. Count and show amounts
3. Comparing

VIII. Data, Statistics, and Probability

A. Graphing

1. Reading pictographs
2. Making pictographs
3. Reading bar graphs
4. Making predictions

B. Data and Statistics

1. Collecting and organizing data
2. Reading/making charts and tables
3. Tally charts
4. Using data in problem solving

C. Probability

1. Certain/possible/impossible events

VIII. Technology

A. Calculators

1. In problem solving
2. As a tool for computing
3. Counting and skip counting
4. Reading a display
5. Number/operations keys

B. Computers

1. Internet access