

Kindergarten

Possible topics to be presented:

I. Whole Number Concepts and Operations

A. Numeration

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

B. Number Theory

1. Even and odd numbers

C. Addition

1. Meaning of addition
2. Basic facts and fact strategies
3. Problem solving

D. Subtraction

1. Meaning of subtraction
2. Basic facts and fact strategies
3. Problem solving

II. Fraction Concepts and Operations

A. Concepts

1. Part of a whole/part of a set

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. 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

IV. Mathematical Processes

A. Problem Solving

1. Analyze Word Problems
 - a. choose an operation
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. use logical reasoning
3. Decision Making
 - a. plan an event, make a choice, etc.

B. Reasoning

1. Critical Thinking, Logical Reasoning
 - a. classifying/sorting
 - b. comparing/contrasting
 - c. finding/extending/using patterns
 - d. making generalizations
 - e. drawing conclusions
2. Visual and Creative Thinking
 - a. visual patterns
 - b. spatial reasoning

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. geometry
 - c. 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. Circles and parts of circles
5. Draw/construct/build
6. 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

VII. Measurement, Time, and Money

A. Measurement

1. Comparing lengths and sizes
2. Nonstandard units
3. Length, estimating
4. Weight, customary
5. Weight/mass, estimating
6. 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. 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

VIII. Technology

A. Computers

1. Internet access