MATHEMATICS Kindergarten

VALUES AND ATTITUDES	The student will: Understand numbers, ways of representing numbers, relationships among numbers, and number systems. Realize God's universe is composed of appropriate spacing, measurement and geometric designs. Use visualization, spatial reasoning, and geometric modeling. Understand patterns, relations, and functions. Use varied methods for analyzing data. Realize that God's universe has order. Use the ability of our minds to reason. Develop mathematical knowledge through problem solving.

STRAND A Number Sense, Numeration, and Numerical Operations

OBJECTIVE

Recognize and write numbers through 10.

- Model numbers in a variety of ways.
- Rote count forward to 30 or beyond and backward from 10.
- Introduce ¼, ½.
- Count by 5s and 10s to 100.

Relationship between numbers and quantities.

- Recognize the number of objects in a set is the same no matter what arrangement.
- Use 1-1 correspondence 0 to 10.
- Recognize numerals and match to sets 0 – 10.
- Use ordinals first through fifth.
- Create and identify sets with more, less, or equal objects.
- Combine and remove objects from sets.
- Divide set into 2 equal parts.
- Introduce place value ones and tens.
- Introduce monetary value of penny, nickel and dime.

Number operations.

- Understand addition and subtraction process.
- Recognize symbols for addition (+); subtraction (-); equal(=).
- Use concrete objects to determine the answers to addition and subtraction problems for two numbers less than 10.
- Restate addition/subtraction facts in 3.2.
- Create and solve story problems in a group.
- Identify mathematical situations occurring in children's literature.

Computation and estimation.

- Develop strategies for whole number computation.
- Estimate quantities less than 20.
- Recognize when an estimate is reasonable.

STRAND B Spatial Sense, Measurement, and Geometry

OBJECTIVE

Properties of objects.

- Complete simple puzzles and visualization tasks.
- Identify position of an object, e.g., inside, outside, above under.
- Compare and order objects.
- Use directional and positional words.
- Compare and order objects by length, weight, and capacity; making direct comparisons with reference objects, e.g., shorter, longer, and heavier, holds more.
- Use non-standard measurement of length, weight, and capacity.
- Introduce correct terminology related to weight, length.

Understand the concept of time and units to measure.

- Name the days of the week.
- Demonstrate an understanding of time, e.g., morning, afternoon.
- Identify time of everyday events to the nearest hour and half hour, e.g.,, lunch time, bedtime.
- Identify units of measurement for time, e.g., clock, watch, calendar.
- Introduce correct terminology related to time, e.g., days, months, and years.

Geometric features.

- Recognize basic two-dimensional (plane) figures: circle, square, triangle, and rectangle.
- Draw and sort squares, circles, rectangles and triangles.
- Compare solid objects by common attributes, e.g., shape, size, number of corners; if they can stack, roll or slide.
- Identify shapes in art and architecture.

STRAND C Patterns, Algebra, and Functions

OBJECTIVE

Patterns and sorting.

- Describe likenesses and differences of given objects.
- Sort by a given attribute.
- Sort by own rule and explain
- Identify objects that do not belong.
- Identify, copy, continue, and describe patterns.
- Create patterns.
- Identify rhythmic patterns in music.

STRAND D Data, Probability, and Statistics

OBJECTIVE

Gather and organize data.

- Collect data to create concrete and pictorial graphs.
- Use data to answer questions about charts and graphs.
- Make predictions based on life experiences.
- Create concrete, pictorial, and symbolic graphs using prepared grids.
- Identify and describe simple patterns by attributes, e.g., color, shape.
- Use mathematical applications in social studies, e.g., graphs and tables.

STRAND E Mathematical Reasoning

OBJECTIVE

Set up a problem.

- Determine strategies to be used.
- Use tools and strategies to model problems, e.g., manipulatives.

Solve problems and justify reasoning.

- Explain solution by making a model or pictorial representations.
- Make precise calculations and check validity of results in the context of the problem.