Phoenix Foundation - GRADE 2 – MATH

Strand - NUMBER

General Outcome – *Develop number sense.*

SPECIFIC OUTCOMES

1. Say the number sequence 0 to 100by:
   - 2s, 5s and 10s, forward and backward, using starting points that are multiples of 2, 5, and 10 respectively
   - 10s, using starting points from 1 to 9
   - 2s, starting from 1.
2. Demonstrate if a number (up to 100) is even or odd.
3. Describe order or relative position, using ordinal numbers (up to tenth).
4. Represent and describe numbers to 100, concretely, pictorially and symbolically.
5. Compare and order numbers up to 100.
6. Estimate quantities to 100, using referents.
7. Illustrate, concretely and pictorially, the meaning of place value for numerals to 100.
8. Demonstrate and explain the effect of adding zero to, or subtracting zero from, any number.
9. Demonstrate an understanding of addition (limited to 1- and 2- digit numerals) with answers to 100 and the corresponding subtraction by:
   - Using personal strategies for adding and subtracting with and without the support of manipulatives
   - Creating and solving problems that involve addition and subtraction
   - Using the commutative property of addition(grouping a set of numbers in different ways does not affect the sum)
   - Explaining that the order in which numbers are subtracted may affect the difference.
10. Apply mental mathematics strategies, such as:
    - Using doubles
    - Making 10
    - One more, one less
    - Two more, two less
    - Building on a known double
    - Thinking addition for subtraction for basic addition facts and related subtraction facts to 18.

Strand – PATTERNS AND RELATIONS (Patterns)

General Outcome – *Use patterns to describe the world and to solve problems.*

SPECIFIC OUTCOMES

1. Demonstrate and understanding of repeating patterns (three to five elements) by:
   - Describing
   - Extending
   - Comparing
   - Creating

Patterns using manipulatives, diagrams, sounds and actions.

2. Demonstrate an understanding of increasing patterns by:
   - Describing
   - Reproducing
   - Extending
   - Creating

   Numerical (numbers to 100) and non-numerical patterns using manipulatives, diagrams, sounds and actions.
3. Sort a set of objects, using two attributes, and explain the sorting rule.

Strand – PATTERNS AND RELATIONS (Variables and Equations)

General Outcome – *Represent algebraic expressions in multiple ways.*

SPECIFIC OUTCOMES

4. Demonstrate and explain the meaning of equality and inequalities symbolically, concretely and pictorially.
5. Record equalities and inequalities symbolically, using the equal symbols or the not equal symbol.

Strand – SHAPE AND SPACE (Measurement)

General Outcome – *Use direct and indirect measurement to solve problems.*

SPECIFIC OUTCOMES

1. Relate the number of days to a week and the number of months to year in a problem-solving context.
2. Relate the size of a unit of measure to the number of units (limited to nonstandard units) used to measure length and mass (weight).
3. Compare and order objects by length, height distance around and mass (weight), using nonstandard units, and make statements of comparison.
4. Measure length to the nearest nonstandard unit by:
   - Using multiple copies of a unit
   - Using a single copy of a unit (iteration process).
5. Demonstrate that changing the orientation of an objects does not alter the measurements of its attributes.

Strand – SHAPE AND SPACE (3-D Objects and 2-D Shapes)

General Outcome – *Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.*

SPECIFIC OUTCOMES

6. Sort 2-D shapes and 3-D objects, using tow attributes, and explain the sorting rule.
7. Describe, compare and construct 3-D objects, including:
   - Cubes
   - Spheres
   - Cones
   - Cylinders
   - Pyramids.
8. Describe, compare and construct 2-D shapes, including:
   - Triangles
   - Squares
   - Rectangles
   - Circles.
9. Identify 2-D shapes as parts of 3-D objects in the environment.

Strand – SHAPE AND SPACE (Transformations)

General Outcome – *Describe and analyze position and motion of objects and shapes.*

SPECIFIC OUTCOMES

N/A

Strand – STATISTICS AND PROBABILITY (Data Analysis)

General Outcome – *Collect, display and analyze data to solve problems.*

SPECIFIC OUTCOMES

1. Gather and record data about self and others to answer questions.
2. Construct and interpret concrete graphs and pictographs to solve problems.

Strand – STATISTICS AND PROBABILITY (Chance and Uncertainty)

General Outcome – *Use experimental or theoretical probabilities to represent and solve problems involving uncertainty.*

SPECIFIC OUTCOMES

N/A