GRADE 2

Mathematical Processes

Standard 2-1: The student will understand and utilize the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.

Indicators	PLT Activities
2 - 1.1 Apply substantive mathematical problem solving strategies.	41- How Plants Grow (variation)
2 - 1.2 Generate conjectures and exchange mathematical ideas.	
2 - 1.3 Explain and justify answers to simple problems.	
2 - 1.4 Analyze patterns by reasoning systematically.	
2 - 1.5 Generalize mathematical concepts.	
2 - 1.6 Use a variety of forms of mathematical communication.	
2 - 1.7 Generalize connections among mathematics, the environment, and other subjects.	1-The Shape of Things 4-Sounds Around 6-Picture This! 25-Birds and Worms 41- How Plants Grow (variation) 65- Bursting Buds 67-How Big Is Your Tree? (variation)
2 - 1.8 Use multiple informal representations to convey mathematical ideas.	41- How Plants Grow (variation) 65- Bursting Buds 77- Trees in Trouble

Number and Operations

Standard 2-2: The student will demonstrate through the mathematical processes an understanding of the base-ten numeration system; place values; and accurate, efficient, and generalizable methods of adding and subtracting whole numbers.

Indicators	PLT Activities
2 - 2.1 Generate estimation strategies to	

determine the approximate number of objects in a set of no more than 1,000 objects.	
2 - 2.2 Represent quantities in word form through *twenty*.	
2 - 2.3 Represent multiples of ten in word form through *ninety*.	
2 - 2.4 Compare whole number quantities through 999 by using the terms *is less than, is greater than,* and *is equal to* and the symbols <, >, and =.	27-Every Tree for Itself 41- How Plants Grow (variation)
2 - 2.5 Interpret models of equal grouping (multiplication) as repeated addition and arrays.	
2 - 2.6 Interpret models of sharing equally (division) in as repeated subtraction and arrays.	
2 - 2.7 Generate strategies to add and subtract pairs of two-digit whole numbers with regrouping.	
2 - 2.8 Generate addition and subtraction strategies to find missing addends and subtrahends in number combinations through 20.	
2 - 2.9 Generate strategies to round numbers through 90 to the nearest 10.	
2 - 2.10 Analyze the magnitude of digits through 9,999 on the basis of their place values.	

Algebra

Standard 2-3: The student will demonstrate through the mathematical processes an understanding of numeric patterns and quantitative and qualitative change.

Indicators	PLT Activities
2 - 3.1 Analyze numeric patterns in skip counting that uses the numerals 1 through 10.	
2 - 3.2 Translate patterns into rules for simple multiples.	
2 - 3.3 Analyze relationships to complete and extend growing and repeating patterns involving numbers, symbols, and objects.	
2 - 3.4 Identify quantitative and qualitative change over time.	
2 - 3.5 Analyze quantitative and qualitative change over time.	41- How Plants Grow (variation) 80-Nothing Succeeds Like Succession

Geometry

Standard 2-4: The student will demonstrate through the mathematical processes an understanding of basic spatial reasoning and the connection between the identification of basic attributes and the classification of three-dimensional shapes.

Indicators	PLT Activities
2 - 4.1 Analyze the three dimensional shapes spheres, cubes, cylinders, prisms, pyramids, and cones according to the number and shape of the faces, edges, corners, and bases of each.	
2 - 4.2 Identify multiple lines of symmetry.	
2 - 4.3 Predict the results of combining and subdividing polygons and circles.	

Measurement

Standard 2-5: The student will demonstrate through the mathematical processes an understanding of the value of combinations of coins and bills and the measurement of length, weight, time, and temperature.

Indicators	PLT Activities
2 - 5.1 Use a counting procedure to determine the value of a collection of coins and bills.	
2 - 5.2 Use coins to make change up to one dollar.	
2 - 5.3 Use appropriate tools to measure objects to the nearest whole unit: measuring length in centimeters, feet, and yards; measuring liquid volume in cups, quarts, and gallons; measuring weight in ounces and pounds; and measuring temperature on Celsius and Fahrenheit thermometers.	41- How Plants Grow (variation) 48-Field Forest Stream (variation) 67-How Big is Your Tree? (variation)
2 - 5.4 Generate common measurement referents for feet, yards, and centimeters.	41- How Plants Grow (variation) 48-Field Forest Stream (variation) 67-How Big is Your Tree? (variation)
2 - 5.5 Use common measurement referents to make estimates in feet, yards, and centimeters.	41- How Plants Grow (variation) 48-Field Forest Stream (variation) 67-How Big is Your Tree? (variation)
2 - 5.6 Predict whether the measurement will be greater or smaller when different units are used to	

measure the same object.	
2 - 5.7 Use analog and digital clocks to tell and record time to the nearest quarter hour and to the nearest five minute interval.	
2 - 5.8 Match *a.m.* and *p.m.* to familiar situations.	
2 - 5.9 Recall equivalencies associated with length and time: 12 inches = 1 foot, 3 feet = 1 yard, 60 minutes = 1 hour, and 24 hours = 1 day.	

Data Analysis and Probability

Standard 2-6: The student will demonstrate through the mathematical processes an understanding of creating questions to collect data, organizing data, describing trends of a data set, and making predictions based on data.

Indicators	**PLT Activities**
2 - 6.1 Create survey questions to collect data.	4-Sounds Around 6-Picture This!
2 - 6.2 Organize data in charts, pictographs, and tables.	1-The Shape of Things 25-Birds and Worms
2 - 6.3 Infer trends in a data set as increasing, decreasing, or random.	41- How Plants Grow (variation) 67-How Big is Your Tree (variation)
2 - 6.4 Predict on the basis of data whether events are *more likely* or *less likely* to occur.	