

GRADE 1

Mathematical Processes

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

Indicators	PLT Activities
1-1.1 Apply substantive mathematical problem-solving strategies.	41- How Plants Grow (variation) 65- Bursting Buds (variation)
1-1.2 Generate conjectures and exchange mathematical ideas.	
1-1.3 Explain and justify answers to simple problems.	
1-1.4 Analyze patterns by reasoning systematically.	
1-1.5 Generalize mathematical concepts.	
1-1.6 Use a variety of forms of mathematical communication.	
1-1.7 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)
1-1.8 Use multiple informal representations to convey mathematical ideas.	41- How Plants Grow (variation) 65- Bursting Buds (variation)

Number and Operations

Standard 1-2: The student will demonstrate through the mathematical processes a sense of quantity and numeral relationships; the relationships among addition, subtraction, and related basic facts; and the connections among numeric, oral, and written-word forms of whole numbers.

Indicators	PLT Activities
1- 2.1 Translate between numeral and quantity through 100.	6-Picture This!
1- 2.2 Use estimation to determine the	

approximate number of objects in a set of 20 to 100 objects.	
1- 2.3 Represent quantities in word form through <i>ten</i> .	6-Picture This!
1- 2.4 Recognize whole number words that correspond to numerals through <i>twenty</i> .	6-Picture This! 25-Birds and Worms
1- 2.5 Compare whole number quantities through 100 by using the terms <i>is greater than</i> , <i>is less than</i> , and <i>is equal to</i> .	27-Every Tree for Itself 41- How Plants Grow (variation)
1- 2.6 Recall basic addition facts through 9 + 9 and corresponding subtraction facts.	
1- 2.7 Summarize the inverse relationship between addition and subtraction.	
1- 2.8 Generate strategies to add and subtract without regrouping through two digit numbers.	
1- 2.9 Analyze the magnitude of digits through 999 on the basis of their place values.	

Algebra

Standard 1-3: The student will demonstrate through the mathematical processes a sense of numeric patterns, the relationship between addition and subtraction, and change over time.

Indicators	PLT Activities
1- 3.1 Analyze numeric patterns in addition and subtraction to develop strategies for acquiring basic facts.	
1 - 3.2 Translate patterns into rules for simple addition and subtraction.	
1- 3.3 Illustrate the commutative property based on basic facts.	
1- 3.4 Analyze numeric relationships to complete and extend simple patterns.	
1- 3.5 Classify a number as odd or even.	
1- 3.6 Classify change over time as quantitative or qualitative.	41- How Plants Grow (variation) 65- Bursting Buds (variation)

Geometry

Standard 1-4: The student will demonstrate through the mathematical processes a sense of two- and three-dimensional geometric shapes, symmetry, and relative positions and directions in space.

Indicators	PLT Activities
1 - 4.1 Identify the three dimensional geometric shapes prism, pyramid, and cone.	
1 - 4.2 Analyze the two dimensional shapes circle, square, triangle, and rectangle.	1-The Shape of Things
1 - 4.3 Classify two dimensional shapes as polygons or nonpolygons.	
1 - 4.4 Identify a line of symmetry.	
1 - 4.5 Use the positional and directional terms <i>north</i> , <i>south</i> , <i>east</i> , and <i>west</i> to describe location and movement.	

Measurement

Standard 1-5: The student will demonstrate through the mathematical processes a sense of the value of combinations of coins and the measurement of length, weight, time, and temperature.

Indicators	PLT Activities
1 - 5.1 Use a counting procedure to determine the value of a collection of pennies, nickels, dimes, and quarters totaling less than a dollar.	
1 - 5.2 Represent a nickel, a dime, a quarter, a half dollar, and a dollar in combinations of coins.	
1 - 5.3 Represent money by using the cent and dollar notations.	
1 - 5.4 Use whole inch units to measure the length of an object.	41- How Plants Grow (variation) 67-How Big is Your Tree? (variation)
1 - 5.5 Generate common referents for whole inches.	4-Sounds Around
1 - 5.6 Use common referents to make estimates in whole inches.	41- How Plants Grow (variation) 67-How Big is Your Tree? (variation)
1 - 5.7 Use nonstandard units to measure the weight of objects.	
1 - 5.8 Use analog and digital clocks to tell	

and record time to the half hour.	
1 - 5.9 Illustrate past and future dates on a calendar.	
1 - 5.10 Represent dates in standard form (June 1, 2007, for example) and numeric form (6-1-2007, for example).	
1 - 5.11 Use Celsius and Fahrenheit thermometers to measure temperature.	48-Field Forest Stream (variation)

Data Analysis and Probability

Standard 1-6: The student will demonstrate through the mathematical processes a sense of collecting, organizing, and interpreting data and of making predictions on the basis of data.

Indicators	PLT Activities
1-6.1 Use survey questions to collect data.	4-Sounds Around 6-Picture This!
1-6.2 Organize data in picture graphs, object graphs, bar graphs, and tables.	1-The Shape of Things 25-Birds and Worms 65- Bursting Buds
1-6.3 Interpret data in picture graphs, object graphs, bar graphs, and tables by using the comparative terms <i>more</i> , <i>less</i> , <i>greater</i> , <i>fewer</i> , <i>greater than</i> , and <i>less than</i> .	
1-6.4 Predict on the basis of data whether events are <i>likely</i> or <i>unlikely</i> to occur.	