

Matrix: Sweet Sale

Student's Name:		Grade Level:		School:	
Analytical Score:			Holistic Score: N A P E		
<input type="checkbox"/> Understanding:		N A P E		Comments or Observations:	
<input type="checkbox"/> Reasoning, Strategies, & Mathematical Procedures:		N A P E			
<input type="checkbox"/> Communication:		N A P E			
APS MATHEMATICS STRAND: Number Sense and Operations					
GRADE: KINDERGARTEN					
Reads numerals to 20 in and out of sequence.		Connects numerals to the quantities they represent.		Represents numbers in a variety of equivalent ways (e.g., dots, pictures, numerals).	
Demonstrates one-to-one correspondence by keeping track of quantities while counting.		Demonstrates that the meaning of a number does not change no matter how objects are grouped.		Combines and separates two single-digit numbers using pictures, stories, and objects to model the situation.	
Creates a set of a given size.		Combines and separates sets of objects with quantities and identifies the parts and the whole.		Records numerical information using pictures, words, and/or numbers.	
GRADE: FIRST					
Counts orally by 2s to 30 and by 5s and 10s to 100.		Finds the sum or difference of two quantities up to 20 using symbols in problem-solving situations (e.g., $12+5=17$, $12-5=7$).		Identifies equal shares in examples of models partitioned with equal and unequal parts (e.g., share 12 M&M candies among 3 friends, share 11 apples among 5 friends).	
Forms and counts groups of objects (e.g., 2s, 5s, 10s).		Demonstrates that the number of objects (up to 20) does not change when the objects are moved or rearranged.		Uses estimation and other methods to justify whether or not an answer is reasonable (e.g., Will 25 marbles fit in this small container?).	

Represents equivalent forms of the same number (i.e., part – part – whole) through the use of physical models, diagrams, and number expressions to 20 (e.g., $3+5=8$, $7+1=8$, $2+6=8$).		Develops strategies and estimation skills for solving addition and subtraction problems.			
Builds, estimates, and compares combinations of numbers to 20 in different ways using pictures, stories, and objects to model the combinations.		Records strategies for solving, combining, and separating problems using pictures, numbers, equations, and words.			
GRADE: SECOND					
Counts by 2s to 100, by 5s and 10s to 200 and by 100s to 1,000.		Uses and explains multiple strategies to solve addition and subtraction problems, with and without re-grouping, using two-digit numbers.		Estimates sums and differences of one- and two-digit numbers and explains whether the answer is reasonable.	
Applies patterns in skip counting; compares and defends the relationship between skip counting, grouping, and equal sets.		Decomposes and recombines numbers in logical ways to solve problems (e.g., $8+5 = (3+5)+5 = 3+(5+5) = 3+10=13$).		Explains properties of addition (e.g., associative, commutative, and identity property of 0).	
Develops fluency with 10 as an important (anchor, landmark, friendly) number and applies it in problem situations.		Writes addition and subtraction equations for problem situations with one- or two-digit numbers using vertical or horizontal formats.			
Analyzes relationships of quantities to 20 using part – part – whole (e.g., $1+7$, $2+6$, $3+5$, $4+4$: all equal 8.).		Solves the two types of situational subtraction problems: comparing two sets of objects and separating parts from whole.			
APS MATHEMATICS STRAND: Geometry, Spatial Sense, and Measurement					
GRADE: KINDERGARTEN					
Identifies penny, nickel, dime, and quarter.					

GRADE: FIRST				
Identifies the value of a penny, nickel, dime and quarter.		Models different combinations of coins that equal the same value up to 25 cents.		
GRADE: SECOND				
Identifies the values and names of half-dollar and dollar.		Counts various coin combinations using quarters, dimes, nickels, and pennies to sums of 50 cents.		Uses the cent symbol, dollar symbol, and decimal point correctly.
APS MATHEMATICS STRAND: Patterns, Functions, and Algebraic Concepts				
GRADE: KINDERGARTEN				
Identifies, describes, and extends patterns with familiar objects in both classroom and real-life situations.		Creates, describes, and extends patterns.		
GRADE: FIRST				
Identifies, describes, creates, and extends patterns observed in familiar objects in real-life situations (e.g. 1 child = 2 eyes, 2 children = 4 eyes).		Describes how a pattern develops, repeats, and builds toward more complex patterns.		
GRADE: SECOND				
Describes, creates, and extends a wide variety of patterns.		Identifies patterns in the number system (e.g., 5, 10, 15...).		Develops and applies more complex patterns and relationships in real-life and mathematical problem situations.
APS MATHEMATICS STRAND: Global Mathematical Processes				
GRADE: K - 12				
Develops resourcefulness and perseverance in problem solving in mathematics and other disciplines.		Recognizes when to use previously learned strategies to solve new problems.		Develops and uses strategies for solving given problems.

Monitors and reflects on the process of mathematical problem solving.		Makes and investigates mathematical conjectures and uses them successfully in developing and evaluating mathematical arguments and proofs.		Uses the concept of counterexample to test the legitimacy of an argument.	
Develops a logical sequence of arguments leading to a valid conclusion or solution to a problem (statement/reasons, proof, informal proof, and algebraic steps).		Works in teams to share ideas, to develop and coordinate group approaches to problems, and to share from each other in communicating findings.		Relates applications to mathematical language in various modalities.	
Communicates mathematical thinking coherently and clearly to others.		Analyzes and evaluates mathematical thinking and strategies of others.		Identifies and connects functions with real-world applications.	
Identifies how seemingly different mathematical situations may be essentially the same (e.g. the intersection of two lines is the same as the solution to a system of linear equations).		Investigates and explains the mathematics required for various careers.		Recognizes and applies mathematics in contexts outside the mathematics course.	
Develops a repertoire of mathematical representations that can be used purposefully, and appropriately interchangeably (e.g. pictures, written symbols, oral language, real-world situations, and manipulative models).		Selects, applies, and translates among mathematical representations to solve problems.		Uses representations to model and interpret physical, social, and mathematical phenomena.	