

Math Shelf Alignment Document

The alignment between Math Shelf Preschool Assessment, DRDP Cognition Math (COG: Math), Teaching Strategies Gold Math Objectives, Head Start ELOF Math Development, and the Math Shelf Program Levels indicates a significant correspondence in math content and structure. The standards, objectives, and measures across these metrics focus on similar key math concepts and skills including: classification, patterns, understanding numbers, math operations, measurement, and geometry/positional language. As evidenced in the alignment columns below, Math Shelf Assessment, DRDP COG: MATH, Teaching Strategies Gold, HS ELOF Math Development, and the Math Shelf (MS) Program share similar foci and developmental levels.

Math Shelf Preschool Assessment	DRDP COG: MATH	Teaching Strategies Gold	HS ELOF Math Development	Math Shelf Program Levels
Classification & Patterns <ul style="list-style-type: none"> Sorts and classifies objects into three or more groups Recognizes and extends patterns (AB, AABB, ABC) Matches objects via color, size, shape, orientation and other attributes Distinguishes between similarities and differences 	COG: MATH 2: Classification Child shows an increasing ability to compare, match, and sort objects into groups according to their attributes. COG: MATH 6: Patterning Child shows an increasing ability to recognize, reproduce and create patterns of varying complexity.	Objective 23 - Demonstrates knowledge of patterns <ul style="list-style-type: none"> Copies simple repeating patterns. Extends and creates simple repeating patterns. 	Math 7: Understands simple patterns <ul style="list-style-type: none"> Fills in missing elements of patterns Duplicates simple patterns Extends simple patterns Identifies the core unit of sequentially repeating patterns 	MS: Pre-math Skills - Level 1 <ul style="list-style-type: none"> Names / matches primary and secondary colors Classifies items by size, shape and orientation Sorts objects into three or more groups by attributes Recognizes and extends patterns (AB, AABB, ABC) Identifies similarities and differences
Number Sense <ul style="list-style-type: none"> Counts to determine <i>how many</i> objects with in 10 Identifies numerals and knows number sequence to 10 Matches numerals to collections to 10 Compares numerals and numbers of objects to 10 (more, less, same) Decomposes 10 into smaller numbers 	COG: MATH 3: Number Sense of Quantity Child shows developing understanding of number and quantity.	Objective 20 - Uses number concepts and operations <ul style="list-style-type: none"> a. Counts - Verbally counts to 20; counts 10–20 objects accurately; knows the last number states how many in all; tells what number (1–10) comes next in order by counting b. Quantifies Makes sets of 6–10 objects and then describes the parts; identifies which part has more, less, or the same (equal); c. Connects numerals with their quantities - Identifies numerals to 10 by name, and connects each to counted objects 	Counting & Cardinality <ul style="list-style-type: none"> Math 1: Knows number names and count sequence to 20 Math 2: Recognizes, without counting, small quantities up to five Math 3: Understands relationships between numbers and quantities to 10 Math 4: Compares numbers by identifying more than, less than, or the same between groups of objects Math 5: Associates quantity with written numerals up to 5 	MS: Numbers to 10 - Level 7 <ul style="list-style-type: none"> Counts to determine <i>how many</i> objects to 10 (in scattered configurations) Knows numeral names and sequence to 10 Matches numerals to quantities to 10 Decomposes 10 into smaller numbers Compares numerals and numbers of objects to 10 (more, less, same)
Operations & Reasoning <ul style="list-style-type: none"> Understands that putting two groups together will make a bigger group, and that a group of objects can be taken apart to make smaller groups Adds and subtracts with concrete objects within 6 Solves addition and subtraction word problems within 6 	COG: MATH 4: Number Sense of Math Operations Child shows increasing ability to add and subtract small quantities.	Not assessed	Operations / Algebraic Thinking <ul style="list-style-type: none"> Math 6: Understands addition as adding and subtraction as taking away. Represents addition and subtraction with fingers, objects, and drawings up to 5 Solves addition and subtraction word problems up to 5 	MS: Addition within 6 - Level 9 <ul style="list-style-type: none"> Adds and subtracts with concrete objects within 6 (fingers, beads, dice, 10-frame) Counts on from the larger number to solve addition problems and counts down to solve subtraction problems Solves addition and subtraction word problems

Math Shelf Alignment Document (Continued)

Math Shelf Preschool Assessment	DRDP COG: MATH	Teaching Strategies Gold	HS ELOF Math Development	Math Shelf Program Levels
Geometry & Spatial Thinking <ul style="list-style-type: none"> Names basic shapes irrespective of size and orientation Identifies shapes in everyday environments Sorts two-and-three dimensional shapes Names positions of objects and people in space (near/far above/below, next to/besides, inside/outside, in front/behind) 	COG MATH 7: Shapes Child shows an increasing knowledge of shapes and their characteristics.	Objective 21 - Explores and describes spatial relationships and shapes <u>a. Understands spatial relationships</u> - Uses and responds appropriately to positional words <u>b. Understands shapes</u> Describes basic two- and three-dimensional shapes; recognizes basic shapes in a new orientation	Geometry & Spatial Sense <u>Math 9:</u> Identifies, describes, compares, and composes shapes - Names and describes shapes in terms of length of sides, number of sides, and number of angles - Correctly names basic shapes regardless of size and orientation - Analyzes, compares and sorts two-and three-dimensional shapes - Creates and builds shapes from components. <u>Math 10:</u> Explores the positions of objects in space - Understands and uses language related to directionality, order, and the position of objects	MS Geometry: Level 5 - Names 2D shapes (squares, rectangles, circles, and triangles) – Identifies shapes in real world environments – Counts shape sides and angles – Sorts and names basic shapes irrespective of size and orientation - Creates and builds shapes from other shapes (rectangles from two triangles, hexagons from three triangles, etc.) - Names positions of objects and people in space (near/far above/below, next to/besides, inside/outside, in front/behind).
Measurement <ul style="list-style-type: none"> Measures objects with standard and nonstandard measuring tools Compares objects in terms of length, height, weight, and capacity Uses differences in measurements to make comparisons 	COG MATH 5: Measurement <i>Child shows an increasing understanding of measurable properties such as size, length, weight, and capacity and how to quantify these properties.</i>	Objective 22 - Compares and measures <u>a. Compares and orders</u> a small set of objects as appropriate according to size, length, weight, area, or volume <u>b. Measuring</u> - Uses multiples of the same unit to measure; uses numbers to compare; knows the purpose of standard measuring tools <u>c. Time</u> - Relates time to daily routines and schedule. Knows a few ordinal numbers	Measurement <u>Math 8:</u> Measures objects by their various attributes. Uses differences in attributes to make comparisons - Measures objects using standard and non-standard measurement. - Uses differences in measurements to make comparisons - Uses comparative language, such as shortest, heavier, or biggest	MS: Measurement Level 8 – Measures and records the length and weight of objects using standard and non-standard measuring tools - Compares objects in terms of length, height, weight, and capacity – Associates thermometer readings with weather and seasons