

MATHEMATICS STANDARDS Kindergarten

Student Performance Expectations: All students who have completed one year of Kindergarten math shall be expected to: Demonstrate an understanding of small numbers, quantities, and simple shapes in their everyday environment. They count, compare, describe and sort objects, and develop a sense of properties and patterns.

STANDARD 1 NUMBER SENSE

Standard 1.0: Students demonstrate an understanding of the relationship between numbers and quantities (i.e., that a set of objects has the same number of objects in different situations regardless of its position or arrangement).

- 1.1 Compare two or more sets of objects up to 20 in each group and identify which set is equal to, more than, or less than the other.
- 1.2 Count, recognize, represent, name, and order a number of objects up to 50.
- 1.3 Show that the larger numbers describe sets with more objects in them than the smaller numbers have.
- 1.4 Write numbers 0-30.

Standard 2.0: Students demonstrate an understanding and describe simple additions and subtractions.

- 2.1 Use concrete objects to determine the answers to addition and subtraction problems (for two numbers that are each less than 10).

Standard 3.0: Students use estimation strategies in computation and problem solving that involve numbers that use the ones and tens places.

- 3.1 Recognize when an estimate is reasonable.
- 3.2 Find hidden or missing numbers in a series of numbers. Order numbers.

STANDARD 2 ALGEBRA AND FUNCTIONS

Standard 1.0 Students sort and classify objects.

- 1.1 Identify, sort, and classify objects by attribute and identify objects that do not belong to a particular group.
- 1.2 Order objects by size.
- 1.3 Compare and describe objects by attributes.

STANDARD 3 MEASUREMENT AND GEOMETRY

Standard 1.0: Students demonstrate an understanding of the concept of time and units to measure it; they understand that objects have properties, such as length, weight, and capacity, and that comparisons may be made by referring to those properties.

- 1.1 Compare the length, weight, and capacity of objects by making direct comparisons with reference objects (e.g., note which object is shorter, longer, taller, lighter, heavier, or holds more).
- 1.2 Demonstrate an understanding of concepts of time (e.g., morning, afternoon, evening, today, yesterday, tomorrow, week, year) and tools that measure time (e.g., clock, calendar).
- 1.3 Name the days of the week.
- 1.4 Identify the time (to the nearest hour) of everyday events (e.g., lunch time is 12 o'clock: bedtime is 8 o'clock at night).

Standard 2.0: Students will identify common objects in their environment and describe the geometric features.

- 2.1 Identify and describe common geometric objects (e.g., circle, triangle, square, rectangle, cube, sphere, cone).
- 2.2 Compare familiar plane and solid objects by common attributes (e.g., position, shape, size, roundness, number of corners).

STANDARD 4 STATISTICS, DATA ANALYSIS, AND PROBABILITY

Standard 1.0: Students collect information about objects and events in their environment.

- 1.1 Pose information questions; collect data, and record the results using objects, pictures, and picture graphs.
- 1.2 Identify, describe, and extend simple patterns (such as circles or triangles) by referring to their shapes, sizes, or colors.
- 1.3 Gather data to make predictions.

STANDARD 5 MATHEMATICAL REASONING

Standard 1.0: Students make decisions about how to set up a problem.

- 1.1 Determine the approach, materials, and strategies to be used.
- 1.2 Use tools and strategies, such as manipulatives or sketches, to model problems.

Standard 2.0: Students solve problems in reasonable ways and justify their reasoning.

- 2.1 Explain the reasoning used with concrete objects and/or pictorial representations.

2.2 Make precise calculations and check the validity of the results in the context of the problem.