

# Math

## PRE KINDERGARTEN (AGE 4)

### STANDARD 1

*The student understands and applies the concepts and procedures of number sense and operations*

To meet this standard, the student will:

**Benchmark PK4.1.1: Understand and represent whole numbers by exploring number relationships using concrete materials, drawings, numerals, and number words**

**Indicators:**

- PK4.1.1.1 Count objects 0-12
- PK4.1.1.2 Identify numbers 0-12
- PK4.1.1.3 Rote count 0-30
- PK4.1.1.4 Demonstrate 1-1 correspondence to 12

**Benchmark PK4.1.2: Compare and order whole numbers using concrete materials and drawings to develop number meanings**

**Indicators:**

- PK4.1.2.1 Demonstrate an understanding of more and less
- PK4.1.2.2 Explore quantity and number
- PK4.1.2.3 Understand the concept of number sets

**Benchmark PK4.1.3: Represent fractions (halves as part of a whole) using concrete materials**

**Indicator:**

- PK4.1.3.1 Understand the concept of one-half

**Benchmark PK4.1.4: Understand the significance of numbers within the surrounding environment**

**Indicators:**

- PK4.1.4.1 Use mathematical Language to identify and describe numbers in real life situations
- PK4.1.4.2 Discuss the use of numbers and arrangements in real life situations (e.g., there are 10 students in this class, 3 boys and 7 girls)
- PK4.1.4.3 Recognize numbers used in the Bible

Key: 1. Grade 1.1 Standard 1.1.1 Benchmark 1.1.1.1 Indicator

SCS Curriculum, Math, Pre-Kindergarten (age 4), approved Jan. 15, 2007, proposed revision 5-09

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## STANDARD 2

*The student understands and applies concepts and procedures of patterns and algebra*

**To meet this standard, the student will:**

**Benchmark PK4.2.1: Investigate situations**

**Indicators:**

- PK4.2.1.1 Observe and create patterns
- PK4.2.1.2 Recognize simple patterns and duplicate them
- PK4.2.1.3 Duplicate and/or create patterns with 2 or 3 attributes

**Benchmark 4.2.2: Explore patterns and pattern rules**

**Indicators:**

- PK4.2.2.1 Interpret patterns verbally
- PK4.2.2.2 Recognize patterns in the environment (God's world)

**Benchmark 4.2.3: Identify relationships between patterns**

**Indicator:**

- PK4.2.3.1 Compare patterns using objects, pictures, actions, numbers and spoken words

Key: 1 Grade 1.1 Standard 1.1.1 Benchmark 1.1.1.1 Indicator

SCS Curriculum, Math, Pre-Kindergarten (Age 4), approved Jan. 15, 2007, revised May, 2009

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PRE KINDERGARTEN (AGE 4)

## STANDARD 3

*The student understands and applies the concepts and procedures of geometry*

**To meet this standard, the student will:**

**Benchmark PK4.3.1: Identify, describe, compare and classify polygons using concrete materials and drawings**

**Indicators:**

- PK4.3.1.1 Recognize geometric shapes and their names (circle, square, triangle, heart, star, rectangle, hexagon, octagon, kite)
- PK4.3.1.2 Sort and classify into groups according to shapes, color, and/or size
- PK4.3.1.3 Explore the use of terms used to describe geometric attributes
- PK4.3.1.4 Order several objects on the basis of one attribute
- PK4.3.1.5 Sort objects into subgroups that vary by one or two attributes
- PK4.3.1.6 Explore the concept of parts of a whole (puzzles)

**Benchmark PK4.3.2: Investigate the attributes and build three-dimensional objects**

**Indicator:**

- PK4.3.2.1 Explore the concept of spatial relationships

*Key: 1. Grade 1.1 Standard 1.1.1 Benchmark 1.1.1.1 Indicator*

*SCS Curriculum, Math, Pre-Kindergarten (Age 4), approved Jan. 15, 2007, revised May, 2009*

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PRE KINDERGARTEN (AGE 4)

## STANDARD 4

*The student understands and applies the concepts and procedures of measurement*

To meet this standard, the student will:

**Benchmark PK4.4.1: Demonstrate an understanding of and ability to apply measurement terms: time (calendar, day)**

**Indicators:**

- PK4.4.1.1 Explore calendar
- PK4.4.1.2 Develop a sense of time (day and night)
- PK4.4.1.3 Understand the sequence of days of the week

**Benchmark PK4.4.2: Identify relationships between and among measurement concepts**

**Indicators:**

- PK4.4.2.1 Compare objects by size (big, small, more, less, same)
- PK4.4.2.1 Share and explain mathematical ideas using comparative terms (more, less, big, small, and graphs)
- PK4.4.2.2 Understand and use comparative words

Key: 1 Grade 1.1 Standard 1.1.1 Benchmark 1.1.1.1 Indicator

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PRE KINDERGARTEN (AGE 4)

## STANDARD 5

The student *understands and applies the concepts and procedures of data analysis and probability*

To meet this standard, the student will:

**Benchmark PK4.5.1: Collect, organize, and describe data using concrete materials and drawings**

**Indicators:**

- PK4.5.1.1 Make and interpret graphs using objects and pictures
- PK4.5.1.2 Compare data using terms such as more/less, big/small, and ordinal position words: first, second, last
- PK4.5.1.3 Begin to understand the concept of positional words: up, down, top, under, next to
- PK4.5.1.4 Express mathematical ideas orally and through graphing
- PK4.5.1.5 Use listening and observation to access and extract mathematical information such as pictures, physical models, classmates, and symbolic representations

**Benchmark PK4.5.2: Demonstrate an understanding of probability**

**Indicators:**

- PK4.5.2.1 Explore concepts of likely and unlikely

Key: 1. Grade 1.1 Standard 1.1.1 Benchmark 1.1.1.1 Indicator

SCS Curriculum, Math, Pre-Kindergarten (Age 4), approved Jan. 15, 2007, revised May, 2009