

Mathematics

COUNTING AND CARDINALITY 1

1 Counts Out Loud: The child counts out loud and uses number words in daily conversations. 1.1

- a Shows interest in and awareness of counting. 1.1.A
- b Rote counts zero to ten and beyond with increasing accuracy. 1.1.B

2 Knows Number Names and Symbols: The child identifies numerals and uses number words in daily activities. 1.2

- a Uses numerals and number symbols in the context of daily routines, activities, and play. 1.2.A
- b Uses and creates symbols to represent numbers. 1.2.B
- c Uses a variety of materials (i.e. clay, sand, shaving cream) to write and form numerals and numeral-like symbols. 1.2.C
- d Identifies numerals zero to ten. 1.2.D
- e Differentiates some written numerals from written letters. 1.2.E

3 Compares Numbers and Quantities: The child applies a range of strategies such as matching or counting to compare sets of objects. 1.3

- a Compares two sets of objects using terms such as greater than, less than, or equal to. 1.3.A

4 Counts to Tell Number of Objects: The child uses number words and counting to identify quantity. 1.4

- a Identifies quantities of three to five objects without counting using visual approximation (Subitize). 1.4.A
- b Demonstrates the ability to match object to object in a group (One-to-one correspondence). 1.4.B
- c Counts groups of objects using a number word for each object (Rational counting). 1.4.C
- d Counts a collection of up to ten items using the last counting word to tell, “How many?” (Cardinality) 1.4.D
- e Matches numerals to quantities using manipulatives. 1.4.E

OPERATIONS AND ALGEBRAIC THINKING 2

1 Explores Addition and Subtraction: The child recognizes addition as adding to and subtraction as taking away from. 2.1

- a Recognizes that adding increases the number of objects in a group. 2.1.A

- b Describes changes in two or more sets of objects when they are combined. 2.1.B
 - c Recognizes that taking away (subtracting) decreases the number of objects in a group 2.1.C
 - d Describes changes in a set of objects when they are separated into parts. 2.1.D
 - e Counts on from the larger number for addition. 2.1.E
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2 Patterning: The child recognizes, fixes, duplicates, extends, describes, and creates patterns. 2.2

- a Recognizes patterns in the real world. 2.2.A
 - b Fixes simple patterns. 2.2.B
 - c Duplicates simple patterns. 2.2.C
 - d Extends Patterns 2.2.D
 - e Creates patterns. 2.2.E
 - f Describes similarities and differences in patterns. 2.2.F
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MEASUREMENT AND DATA 3

1 Sorts and Classifies: The child sorts and groups objects by a variety of attributes. 3.1

- a Sorts and classifies objects by one or more attributes (e.g., size, color, shape, texture, use). 3.1.A
 - b Explains how items were sorted into groups. 3.1.B
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2 Data Analysis: With prompting and support the child collects, organizes, displays, and describes relevant data. 3.2

- a Asks questions to gather measurable data. 3.2.A
 - b Displays data to answer simple questions about themselves or the environment. 3.2.B
 - c Uses descriptive language to compare data in picture graphs or other concrete representations. 3.2.C
 - d Analyzes data from charts and graphs to answer questions. 3.2.D
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3 Measures: The child uses measurement to describe and compare objects in the environment. 3.3

- a Compares objects and uses terms (e.g. lighter-heavier, hotter-colder, and faster-slower). 3.3.A
 - b Uses non-standard units of measurement (e.g., hands, bodies, containers) to estimate measurable attributes. 3.3.B
 - c Uses various standard measuring tools for simple measuring tasks. 3.3.C
 - d Orders objects by measurable attributes. 3.3.D
 - e Uses appropriate vocabulary to describe time and sequence related to daily routines (e.g. tomorrow, yesterday,next, this morning). 3.3.E
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GEOMETRY 4

1 Shapes: The child recognizes names and describes common shapes and their properties. 4.1

- a Recognizes basic two-dimensional shapes when presented in different orientations. 22 4.1.A
 - b Uses the names of geometric shapes when describing objects found in the environment. 4.1.B
 - c Creates two-dimensional shapes during play. 4.1.C
 - d Creates three-dimensional (solid) shapes during play. 4.1.D
 - e Compares, describes, analyzes, and sorts two- and three- dimensional objects in the environment using formal and informal mathematical language with prompting and support based on their attributes. 4.1.E
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2 Spatial Reasoning: The child uses and demonstrates an understanding of positional terms. 4.2

- a Uses and responds to spatial language (e.g., between, inside, under, above, behind). 4.2.A
- b Describes the relative position or location of objects in relation to self or to other objects with mathematical precision. 4.2.B