

# Mathematics

## Comparison and Number - Infant and Toddler (birth - 3 years)

### 1 Infants and toddlers show increasing understanding of comparisons and amount, including use of numbers and counting. 7.1.IT

The infant...

- 1 begins to notice characteristics of objects such as size, color, shape, or quantity. 7.1.IT.1

The toddler...

- 2 matches and sorts objects by size, color, shape, or quantity. 7.1.IT.2
  - 3 begins to use simple counting in play and interactions, although numbers may occur out of order. 7.1.IT.3
  - 4 makes simple comparisons between two objects using words like big, small, more, etc. 7.1.IT.4
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## Numbers and Operations - Preschool (3 - 5 years)

### 1 Children understand counting, ways of representing numbers, and relationships between quantities and numerals. 7.1.PS

The child...

- 1 recognizes small quantities (1 to 5) without counting them (subitizing). 7.1.PS.1
  - 2 counts to 20 verbally. 7.1.PS.2
  - 3 points and counts 10-20 objects accurately. 7.1.PS.3
  - 4 makes sets of 6-10 objects and describes parts. 7.1.PS.4
  - 5 uses language such as more, less or the same amount to compare quantities. 7.1.PS.5
  - 6 identifies numerals to 10 by name. 7.1.PS.6
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## Patterns - Infant and Toddler (birth - 3 years)

### 2 Infants and toddlers begin to recognize patterns. 7.2.IT

The infant...

- 1 demonstrates expectations for familiar sequences of routines and experiences such as crying when it is near feeding time. 7.2.IT.1

The toddler...

- 2 shows recognition of sequence in events or objects. 7.2.IT.2
  - 3 repeats actions in sequence, such as finger plays. 7.2.IT.3
  - 4 notices patterns and objects in the environment. 7.2.IT.4
  - 5 organizes objects into groups during play and exploration. 7.2.IT.5
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## Patterns - Preschool (3 - 5 years)

### 2 Children understand patterns. 7.2.PS

The child...

- 1 recognizes, reproduces and creates patterns moving from simple to complex. 7.2.PS.1
  - 2 extends patterns by predicting what comes next. 7.2.PS.2
  - 3 describes patterns seen in natural and designed settings. 7.2.PS.3
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## Shapes and Spatial Relationships - Infant and Toddler (birth - 3 years)

### 3 Infants and toddlers show increasing understanding of spatial relationships. 7.3.IT

The infant...

- 1 takes objects apart. 7.3.IT.1
- 2 fills and empties containers. 7.3.IT.2

The toddler...

- 3 takes objects apart and attempts to put them together. 7.3.IT.3
  - 4 shows awareness of his or her own body space. 7.3.IT.4
  - 5 matches similar shapes. 7.3.IT.5
  - 6 follows simple direction related to positions such as in, on, under, up, or down. 7.3.IT.6
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**Shapes and Spatial Relationships -  
Preschool (3 - 5 years)**

**3 Children understand shapes and spatial relationships. 7.3.PS**

The child...

- 1 demonstrates understanding of spatial words such as up, down, over, under, top, bottom, inside, outside, in front, and behind. 7.3.PS.1
- 2 identifies and describes two- and three-dimensional shapes. 7.3.PS.2
- 3 notices characteristics, similarities, and differences among shapes such as corners, points, edges, and sides. 7.3.PS.3
- 4 notices how shapes fit together and can be taken apart to form other shapes. 7.3.PS.4

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**Measurements -  
Preschool (3 - 5 years)\***

**4 Children understand comparisons and measurements. 7.4.PS**

The child...

- 1 sorts, classifies, and puts objects in series using a variety of properties. 7.4.PS.1
- 2 makes comparisons between several objects based on one or more attributes, such as length, height, weight, and area using words such as taller, shorter, longer, bigger, smaller, heavier, lighter, full, empty, length, height, and weight. 7.4.PS.2
- 3 measures objects using non-standard units of measurement, such as using blocks to determine how tall a child is. 7.4.PS.3
- 4 explores objects using standard measuring tools such as rulers, measuring cups, and balance scales. 7.4.PS.4
- 5 begins to demonstrate knowledge that measurement requires a 'fair' comparison starting at the same baseline or measuring the same property such as length, height, and volume. 7.4.PS.5
- 6 develops an awareness of simple time concepts within his or her daily life such as day, night; and sequence of usual daily events, such as breakfast, lunch, dinner, bedtime; outdoor time follows snack; and brushing teeth after a meal. 7.4.PS.6

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**Data Analysis -  
Preschool (3 - 5 years)\***

**5 Children demonstrate the process of data analysis by sorting and classifying, asking questions, and finding answers. 7.5.PS**

The child...

- 1 sorts collections of objects into sets such as lines, piles, or groups by color, size, shape, or kind. 7.5.PS.1
- 2 sorts and resorts sets in a variety of ways. 7.5.PS.2
- 3 compares and orders such as most to least, same amount as, and least to most. 7.5.PS.3
- 4 sorts data into two groups such as big and not big, green and not green, and pets and not pets. 7.5.PS.4
- 5 asks questions, collects, records, and organizes data to find answers to questions. 7.5.PS.5