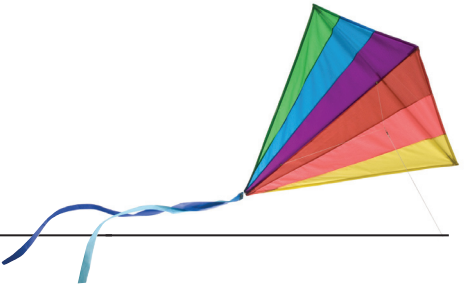
Assessment

TeachingStrategies®



# Alignment of

# Teaching Strategies GOLD® Objectives for Development & Learning: Birth *Through* Kindergarten

WITH

## Massachusetts Curriculum Framework for Mathematics (Kindergarten Standards)

**Alignment of the *Massachusetts Curriculum Framework for Mathematics (Kindergarten Standards)***
**With**
***Teaching Strategies GOLD® Objectives for Development & Learning: Birth Through Kindergarten***

This document aligns the standards for kindergarten in the *Massachusetts Curriculum Framework for Mathematics* with the objectives, dimensions, and indicators of the *Teaching Strategies GOLD®* assessment system.

**References**

Heroman, C., Burts, D. C., Berke, K., & Bickart, T. (2010). *Teaching Strategies GOLD® objectives for development & learning: Birth through kindergarten.* Washington, DC: Teaching Strategies, LLC.

Massachusetts Department of Elementary & Secondary Education. (2011). *Massachusetts curriculum framework for Mathematics*. Malden, MA: Author. Retrieved April, 2011, from http://www.doe.mass.edu/frameworks/math/0111.pdf

| *Massachusetts Curriculum Framework Standards for Mathematics* – Kindergarten Level | *Teaching Strategies GOLD*® Objectives, Dimensions, and Indicators |
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| **Mathematics Standards** | |
| **Counting and Cardinality (K.CC)** | |
| **Know number names and the count sequence.** | |
| 1. Count to 100 by ones and by tens. | 20. Uses number concepts and operations<br>20a. Counts<br>8. Uses number names while counting to 100; counts 30 objects accurately; tells what number comes before and after a specified number up to 20 |
| 2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1). | 20. Uses number concepts and operations<br>20a. Counts<br>8. Uses number names while counting to 100; counts 30 objects accurately; tells what number comes before and after a specified number up to 20 |
| 3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). | 20. Uses number concepts and operations<br>20c. Connects numerals with their quantities<br>8. Identifies numerals to *20* by name and connects each to counted objects |
| **Count to tell the number of objects.** | |
| 4. Understand the relationship between numbers and quantities; connect counting to cardinality.<br>a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. | 20. Uses number concepts and operations<br>20a. Counts<br>6. 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 |
| 4. Understand the relationship between numbers and quantities; connect counting to cardinality.<br>b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. | 20. Uses number concepts and operations<br>20a. Counts<br>6. 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 |
| 4. Understand the relationship between numbers and quantities; connect counting to cardinality.<br>c. Understand that each successive number name refers to a quantity that is one larger. | 20. Uses number concepts and operations<br>20a. Counts<br>8. Uses number names while counting to 100; counts 30 objects accurately; tells what number comes before and after a specified number up to 20<br><br>23. Demonstrates knowledge of patterns<br>8. Recognizes, creates, and explains more complex repeating and simple growing patterns |

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| 5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. | 20. Uses number concepts and operations<br>20b. Quantifies<br>8. Uses a variety of strategies (counting objects or fingers, counting on, or counting back) to solve problems with more than 10 objects |
| **Compare numbers.** | |
| 6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. | 20. Uses number concepts and operations<br>20b. Quantifies<br>6. Makes sets of 6–10 objects and then describes the parts; identifies which part has more, less, or the same (equal); counts all or counts on to find out how many |
| 7. Compare two numbers between 1 and 10 presented as written numerals. | 20. Uses number concepts and operations<br>20b. Quantifies<br>6. Makes sets of 6–10 objects and then describes the parts; identifies which part has more, less, or the same (equal); counts all or counts on to find out how many<br><br>20. Uses number concepts and operations<br>20c. Connects numerals with their quantities<br>6. Identifies numerals to 10 by name and connects each to counted objects |
| **Operations and Algebraic Thinking (K.OA)** | |
| **Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.** | |
| 1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. | 20. Uses number concepts and operations<br>20b. Quantifies<br>8. Uses a variety of strategies (counting objects or fingers, counting on, or counting back) to solve problems with more than 10 objects |
| 2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. | 20. Uses number concepts and operations<br>20b. Quantifies<br>8. Uses a variety of strategies (counting objects or fingers, counting on, or counting back) to solve problems with more than 10 objects |
| 3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1). | 20. Uses number concepts and operations<br>20b. Quantifies<br>8. Uses a variety of strategies (counting objects or fingers, counting on, or counting back) to solve problems with more than 10 objects |
| 4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation. | 20. Uses number concepts and operations<br>20b. Quantifies<br>6. Makes sets of 6–10 objects and then describes the parts; identifies which part has more, less, or the same (equal); counts all or counts on to find out how many |

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| 5. Fluently add and subtract within 5. | 20. Uses number concepts and operations<br>20b. Quantifies<br>8. Uses a variety of strategies (counting objects or fingers, counting on, or counting back) to solve problems with more than 10 objects |
| **Number and Operations in Base Ten (K.NBT)** | |
| **Work with numbers 11-19 to gain foundations for place value.** | |
| 1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. | 20. Uses number concepts and operations<br>20b. Quantifies<br>8. Uses a variety of strategies (counting objects or fingers, counting on, or counting back) to solve problems with more than 10 objects |
| **Measurement and Data (K.MD)** | |
| **Describe and compare measurable attributes.** | |
| 1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. | 22. Compares and measures<br>8. Uses measurement words and some standard measurement tools accurately; uses ordinal numbers from *first* to *tenth* |
| 2. Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.* | 22. Compares and measures<br>8. Uses measurement words and some standard measurement tools accurately; uses ordinal numbers from *first* to *tenth* |
| **Classify objects and count the number of objects in each category.** | |
| 3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. | 13. Uses classification skills<br>6. Groups objects by one characteristic; then regroups them using a different characteristic and indicates the reason<br><br>20. Uses number concepts and operations<br>20b. Quantifies<br>6. Makes sets of 6-10 objects and then describes the parts; identifies which part has more, less, or the same (equal); counts all or counts on to find out how many. |

| **Geometry (K.G)** | |
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| **Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).** | |
| 1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*. | 21. Explores and describes spatial relationships and shapes<br>21a. Understands spatial relationships<br>6. Uses and responds appropriately to positional words indicating location, direction, and distance<br><br>21. Explores and describes spatial relationships and shapes<br>21b. Understands shapes<br>6. Describes basic two- and three-dimensional shapes by using own words; recognizes basic shapes when they are presented in a new orientation |
| 2. Correctly name shapes regardless of their orientations or overall size. | 21. Explores and describes spatial relationships and shapes<br>21b. Understands shapes<br>6. Describes basic two- and three- dimensional shapes by using own words; recognizes basic shapes when they are presented in new orientation |
| 3. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). | 21. Explores and describes spatial relationships and shapes<br>21b. Understands shapes<br>7 emerging to 8. Shows that shapes remain the same when they are turned, flipped, or slid; breaks apart or combines shapes to create different shapes and sizes |
| **Analyze, compare, create, and compose shapes.** | |
| 4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). | 21. Explores and describes spatial relationships and shapes<br>21b. Understands shapes<br>8. Shows that shapes remain the same when they are turned, flipped, or slid; breaks apart or combines shapes to create different shapes and sizes |
| 5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. | 21. Explores and describes spatial relationships and shapes<br>21b. Understands shapes<br>8. Shows that shapes remain the same when they are turned, flipped, or slid; breaks apart or combines shapes to create different shapes and sizes |
| 6. Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"* | 21. Explores and describes spatial relationships and shapes<br>21b. Understands shapes<br>8. Shows that shapes remain the same when they are turned, flipped, or slid; breaks apart or combines shapes to create different shapes and sizes |