

**Correlation to South Carolina Academic Standards
Mathematics – 2007**

**Kindergarten
Developing Number Concepts: Like and Unlike
Module B**

This module includes manipulatives such as collections of objects, number cards, and number lines. One-to-one correspondence, counting, and ordinal numbers are investigated. Concrete objects are used to create models of addition and subtraction. Numbers of objects are compared and described as greater than, less than, or equal to.

This correlation was developed by the Math Out of the Box Staff.

Send email to mootb@clemson.edu with questions and comments.



Correlation Information

The purpose of this document is to provide a correlation of Math Out of the Box lessons to the South Carolina Academic Standards for Mathematics, 2007. These correlations are intended to aid classroom teachers with lesson planning, schools with vertical planning, and districts with curriculum planning.

The correlation document is arranged in the following order:

Process Standards

Process standards that are used in the lessons of the subconcept to develop conceptual understanding of mathematics are listed in this column. It is recommended that one process standard be selected for formative assessment in each subconcept.

Content Standards

The content standards listed in this column are those that are addressed in one or more of the phases of the learning cycle in the listed lessons. Standards are connected by subconcept because conceptual knowledge is built in sets of lessons in the Math Out of the Box curriculum. These subconcepts are connected to a big idea of mathematics. The first lesson of a subconcept is an embedded pre-assessment, connecting to prior learning. The final lesson in a subconcept is designed to be formative and summative.

Horizontal Connections

Connections to mathematics standards in other strands are listed here to show the horizontal weave of the Math Out of the Box curriculum. These connections provide opportunities for the development of connections between mathematical concepts, maintenance of skills, and additional practice.

Vertical Connections

Foundation standards show the vertical articulation of the lessons. At times, an investigation is planned in a lesson to specifically build a foundation for the standards in the next grade or grades. These lessons, or parts of lessons, are essential so that concepts are connected from grade to grade.

Cross Curricular Connections

Connections to standards from other subject areas are listed to aid in cross curricular integration and the development of curriculum maps.



Big Idea: Representations of numbers can be used to describe and learn about the world around us.

Subconcept: Numbers can be analyzed for patterns and relationships.

Lessons 1, 2, 3, 4, 5, 6, 7, 8

Focus Question: What strategies can be used to count to 99?

Process Standards	Content Standards	Horizontal Connections
<p>Mathematics Standard K-1 (Process): The student will have a basic understanding of the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.</p> <p>Indicators K-1.1 Apply substantive mathematical problem-solving strategies. K-1.2 Generate conjectures and exchange mathematical ideas. K-1.3 Explain and justify answers to simple problems. K-1.5 Generalize mathematical concepts. K-1.6 Use a variety of forms of mathematical communication. K-1.7 Generalize connections among mathematics, the environment, and other subjects. K-1.8 Use multiple informal representations to convey mathematical ideas.</p>	<p>Mathematics Standard K-2 (Number and Operations): The student will demonstrate through the mathematical processes an emerging sense of quantity and numeral relationships, sets, and place values.</p> <p>Indicators K-2.1. Recall numbers, counting forward through 99 and backward from 10. K-2.2 Translate between numeral and quantity through 31. K-2.3 Analyze the magnitude of digits through 99 on the basis of their place values. K-2.8 Identify ordinal positions through 31st.</p>	<p>Mathematics Standard K-3 (Algebra): The student will demonstrate through the mathematical processes an emerging sense of repeating and growing patterns and classification based on attributes.</p> <p>Indicators K-3.1 Identify simple growing patterns. K-3.2 Analyze simple repeating and growing relationships to extend patterns. K-3.3 Translate simple repeating and growing patterns into rules.</p> <p>Standard K-5 (Measurement): The student will demonstrate through the mathematical processes an emerging sense of coin values and the measurement concepts of length, weight, time, and temperature.</p> <p>Indicators K-5.7 Use a calendar to identify dates, days of the week, and months of the year.</p>

Notes:

Vertical Connections	Cross Curricular Connections
<p>Grade 1 Standard 1-2 (Number and Operations): The student will demonstrate through the mathematical processes a sense of quantity and numeral relationships; the relationship among addition, subtraction, and related basic facts; and the connections among numeric, oral and written-word forms of whole numbers.</p> <p>Indicators 1-2.1 Translate between numeral and quantity through 100. 1-2.2 Use estimation to determine the approximate number of objects in a set of 20 to 100 objects. 1-2.3 Represent quantities in word form through ten. 1-2.4 Recognize whole-number words that correspond to numerals through twenty. 1-2.9 Analyze the magnitude of digits through 999 on the basis of their place values.</p> <p>Grade 2 Standard 2-2 (Number and Operations): The student will demonstrate through the mathematical processes an understanding of the base-ten numeration system; place values; and accurate, efficient, and generalizable methods of adding and subtracting whole numbers.</p> <p>Indicators 2-2.1 Generate estimation strategies to determine the approximate number of objects in a set of no more than 1,000 objects. 2-2.2 Represent quantities in word form through twenty. 2-2.10 Analyze the magnitude of digits through 9,999 on the basis of their place values.</p> <p>Grade 3 Standard 3-2 (Number and Operations): The student will demonstrate through the mathematical processes an understanding of the representation of whole numbers and fractional parts; the addition and subtraction of whole numbers; accurate, efficient, and generalizable methods of multiplying whole numbers; and the relationships among multiplication, division, and related basic facts.</p> <p>Indicators 3-2.2 Represent in word form whole numbers through <i>nine hundred ninety-nine thousand</i>. 3-2.5 Understand fractions as parts of a whole. 3-2.6 Represent fractions that are greater than or equal to 1. 3-2.9 Analyze the effect that adding, subtracting, or multiplying odd and/or even numbers has on the outcome. 3-2.12 Analyze the magnitude of digits through 999,999 on the basis of their place value</p>	<p>Language Arts Standard K-1 (Reading): The student will begin to read and comprehend a variety of literary texts in print and nonprint formats.</p> <p>Indicators K-1.1 Use pictures and words to make predictions regarding a story read aloud. K-1.4 Generate a retelling that identifies the characters and the setting in a story and relates the important events in sequential order. K-1.6 Use relevant details in summarizing stories read aloud.</p> <p>Standard K-2 (Reading): The student will begin to read and comprehend a variety of informational texts in print and nonprint formats.</p> <p>Indicators K-2.1 Summarize the central idea and details from informational texts read aloud. K-2.2 Analyze texts during classroom discussions to make inferences. K-2.7 Understand graphic features such as illustrations and graphs.</p> <p>Standard K-4 (Writing): The student will begin to create written work that has a clear focus, sufficient detail, coherent organization, effective use of voice, and correct use of the conventions of written Standard American English.</p> <p>Indicators K-4.1 Generate ideas for writing by using techniques such as participating in conversations and looking at pictures. K-4.2 Generate complete sentences orally. K-4.5 Use proofreading skills to edit small-group or whole-class writing with teacher support.</p> <p>Science Standard K-1 (Scientific Inquiry): The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.</p> <p>Indicators K-1.1 Identify observed objects or events by using the senses. K-1.3 Predict and explain information or events based on observation or previous experience.</p>



Big Idea: Big Idea: Representations of numbers can be used to describe and learn about the world around us.

Subconcept: The base-10 number system and its place-value structure can be analyzed for patterns using a variety of representations.

Lessons 9, 10, 11, 12

Focus Question: What strategies can be used to compare numbers?

Process Standards	Content Standards	Horizontal Connections
<p>Mathematics Standard K-1(Process): The student will have a basic understanding of the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.</p> <p>Indicators</p> <p>K-1.1 Apply substantive mathematical problem-solving strategies.</p> <p>K-1.2 Generate conjectures and exchange mathematical ideas.</p> <p>K-1.3 Explain and justify answers to simple problems.</p> <p>K-1.4 Analyze patterns by reasoning systematically.</p> <p>K-1.5 Generalize mathematical concepts.</p> <p>K-1.6 Use a variety of forms of mathematical communication.</p> <p>K-1.7 Generalize connections among mathematics, the environment, and other subjects.</p> <p>K-1.8 Use multiple informal representations to convey mathematical ideas.</p>	<p>Mathematics Standard K-2 (Number and Operations): The student will demonstrate through the mathematical processes an emerging sense of quantity and numeral relationships, sets, and place values.</p> <p>Indicators</p> <p>K-2.1 Recall numbers, counting forward through 99 and backward from 10.</p> <p>K-2.2 Translate between numeral and quantity through 31.</p> <p>K-2.3 Compare sets of no more than 31 objects by using the terms more than, less than, and the same as.</p> <p>K-2.6 Analyze the magnitude of digits through 99 on the basis of their place values.</p> <p>K-2.7 Represent the place value of each digit in a two-digit whole number.</p>	<p>Mathematics Standard K-3 (Algebra): The student will demonstrate through the mathematical processes an emerging sense of repeating and growing patterns and classification based on attributes.</p> <p>Indicators</p> <p>K-3.1 Identify simple growing patterns.</p> <p>K-3.2 Analyze simple repeating and growing relationships to extend patterns.</p> <p>K-3.3 Translate simple repeating and growing patterns into rules.</p>

Notes:

Vertical Connections	Cross Curricular Connections
<p>Grade 1 Standard 1-2 (Number and Operations): The student will demonstrate through the mathematical processes a sense of quantity and numeral relationships; the relationship among addition, subtraction, and related basic facts; and the connections among numeric, oral and written-word forms of whole numbers. Indicators 1-2.1 Translate between numeral and quantity through 100. 1-2.3 Represent quantities in word form through ten. 1-2.4 Recognize whole-number words that correspond to numerals through twenty. 1-2.5 Compare whole-number quantities through 100 by using the terms is greater than, is less than, and is equal to. 1-2.9 Analyze the magnitude of digits through 999 on the basis of their place values.</p> <p>Grade 2 Standard 2-2 (Number and Operations): The student will demonstrate through the mathematical processes an understanding of the base-ten numeration system; place values; and accurate, efficient, and generalizable methods of adding and subtracting whole numbers. Indicators 2-2.1 Generate estimation strategies to determine the approximate number of objects in a set of no more than 1,000 objects. 2-2.2 Represent quantities in word form through twenty. 2-2.4 Compare whole-number quantities through 999 by using the terms is less than, is greater than, and is equal to and the symbols $<$, $>$, and $=$. 2-2.5 Interpret models of equal grouping (multiplication) as repeated addition and arrays. 2-2.6 Interpret models of sharing equally (division) in as repeated subtraction and arrays. 2-2.10 Analyze the magnitude of digits through 9,999 on the basis of their place values.</p> <p>Grade 3 Standard 3-2 (Number and Operations): The student will demonstrate through the mathematical processes an understanding of the representation of whole numbers and fractional parts; the addition and subtraction of whole numbers; accurate, efficient, and generalizable methods of multiplying whole numbers; and the relationships among multiplication, division, and related basic facts. Indicators 3-2.1 Compare whole-number quantities through 999,999 by using the terms is less than, is greater than, and is equal to and the symbols $<$, $>$, and $=$. 3-2.2 Represent in word form whole numbers through nine hundred</p>	<p>Language Arts Standard K-2 (Reading): The student will begin to read and comprehend a variety of informational texts in print and nonprint formats. Indicators K-2.2 Analyze texts during classroom discussions to make inferences. K-2.7 Understand graphic features such as illustrations and graphs.</p> <p>Standard K-4 (Writing): The student will begin to create written work that has a clear focus, sufficient detail, coherent organization, effective use of voice, and correct use of the conventions of written Standard American English. Indicators K-4.1 Generate ideas for writing by using techniques such as participating in conversations and looking at pictures. K-4.2 Generate complete sentences orally. K-4.6 Use strategies to revise small group or whole class writing with teacher support. K-4.7 Use upper case and lower case letters. K-4.8 Use appropriate letter formation when printing.</p> <p>Standard K-5 (Writing): The student will begin to write for a variety of purposes and audiences. Indicators K-5.1 Use drawings, letters, or words to creating written communications such as notes, messages, and lists to inform a specific audience. K-5.3 Use drawings, letters, or words to create descriptions of personal experiences, people, places, or things.</p> <p>Social Studies Standard K-4 (Citizenship): The student will demonstrate an understanding good citizenship. Indicators K-4.2 Demonstrate good citizenship in classroom behaviors, including taking personal responsibility, cooperating and respecting others, taking turns and sharing, and working with others to solve problems.</p>



<p>ninety-nine thousand.</p> <p>3-2.5 Understand fractions as parts of a whole.</p> <p>3-2.7 Recall basic multiplication facts through 12 x 12 and the corresponding division facts.</p> <p>3-2.8 Compare the inverse relationship between multiplication and division.</p> <p>3-2.10 Generate strategies to multiply whole numbers by using one single-digit factor and one multidigit factor.</p> <p>3-2.11 Use base number combinations to compute related multiplication problems that involve multiple of 10.</p> <p>3-2.12 Analyze the magnitude of digits through 999,999 on the basis of their place value.</p>	
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Notes:

Big Idea: Representations of numbers can be used to describe and learn about the world around us.

Subconcept: Meaning for addition and subtraction can be developed by constructing a variety of models and strategies.

Lessons 13, 14, 15

Focus Questions: What strategies can be used to solve addition and subtraction problems?

Process Standards	Content Standards	Horizontal Connections
<p>Mathematics Standard K-1 (Process): The student will have a basic understanding of the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.</p> <p>Indicators</p> <p>K-1.1 Apply substantive mathematical problem-solving strategies.</p> <p>K-1.2 Generate conjectures and exchange mathematical ideas.</p> <p>K-1.3 Explain and justify answers to simple problems.</p> <p>K-1.4 Analyze patterns by reasoning systematically.</p> <p>K-1.5 Generalize mathematical concepts.</p> <p>K-1.6 Use a variety of forms of mathematical communication.</p> <p>K-1.7 Generalize connections among mathematics, the environment, and other subjects.</p> <p>K-1.8 Use multiple informal representations to convey mathematical ideas.</p>	<p>Mathematics Standard K-2 (Number and Operations): The student will demonstrate through the mathematical processes an emerging sense of quantity and numeral relationships, sets, and place values.</p> <p>Indicators</p> <p>K-2.4 Represent simple joining and separating situations through 10.</p> <p>K-2.5 Understand that addition results in increase and subtraction results in decrease.</p>	<p>Mathematics Standard K-6(Data Analysis and Probability): The student will demonstrate through the mathematical processes an emerging sense of organizing and interpret data.</p> <p>Indicators</p> <p>K-6.1 Organize data in graphic displays in the form of drawings and pictures.</p> <p>K-6.2 Interpret data in graphic displays in the form of drawings and pictures.</p>

Notes:

Vertical Connections	Cross Curricular Connections
<p>Grade 1 Standard 1-2 (Number and Operations): The student will demonstrate through the mathematical processes a sense of quantity and numeral relationships; the relationship among addition, subtraction, and related basic facts; and the connections among numeric, oral and written-word forms of whole numbers. Indicators 1-2.6 Recall basic addition facts through $9 + 9$ and corresponding subtraction facts. 1-2.7 Summarize the inverse relationship between addition and subtraction. 1-2.8 Generate strategies to add and subtract without regrouping through two-digit numbers.</p> <p>Grade 2 Standard 2-2 (Number and Operations): The student will demonstrate through the mathematical processes an understanding of the base-ten numeration system; place values; and accurate, efficient, and generalizable methods of adding and subtracting whole numbers. Indicators 2-2.7 Generate strategies to add and subtract pairs of two-digit whole numbers with regrouping. 2-2.8 Generate addition and subtraction strategies to find missing addends and subtrahends in number combinations through 20.</p> <p>Grade 3 Standard 3-2 (Number and Operations): The student will demonstrate through the mathematical processes an understanding of the representation of whole numbers and fractional parts; the addition and subtraction of whole numbers; accurate, efficient, and generalizable methods of multiplying whole numbers; and the relationships among multiplication, division, and related basic facts. Indicators 3-2.3 Apply an algorithm to add and subtract whole numbers fluently.</p>	<p>Language Arts Standard K-1 (Reading): The student will begin to read and comprehend a variety of literary texts in print and nonprint formats. Indicators K-1.1 Use pictures and words to make predictions regarding a story read aloud. K-1.7 Create responses to literary texts through a variety of methods such as writing, creative dramatics, and the visual and performing arts.</p> <p>Standard K-4 (Writing): The student will begin to create written work that has a clear focus, sufficient detail, coherent organization, efficient use of voice, and correct use of the conventions of written Standard American English. Indicators K-4.1 Generate ideas for writing by using techniques such as participating in conversations and looking at pictures. K-4.2 Generate complete sentences orally. K-4.3 Use pictures, letters, or words to tell a story from beginning to end. K-4.6 Use strategies to revise small group or whole class writing with teacher support. K-4.7 Use upper case and lower case letters. K-4.8 Use appropriate letter formation when printing.</p> <p>Standard K-5 (Writing): The student will begin to write for a variety of purposes and audiences. Indicators K-5.3 Use drawings, letters, or words to create descriptions of personal experiences, people, places, or things.</p> <p>Standard K-6 (Researching): The student will begin to access and use information from a variety of sources. Indicators K-6.4 Use complete sentence when orally communicating with others. K-6.5 Understand and follow one- and two-step oral directions.</p>

Notes:



Big Idea: Representations of numbers can be used to describe and learn about the world around us.

Subconcept: Basic concepts of probability can be applied to everyday experiences.

Lessons 16, 17, 18, 19, 20

Focus Question: In what ways can data be described?

Process Standards	Content Standards	Horizontal Connections
<p>Mathematics Standard K-1: The student will have a basic understanding of the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.</p> <p>Indicators K-1.1 Apply substantive mathematical problem-solving strategies. K-1.2 Generate conjectures and exchange mathematical ideas. K-1.3 Explain and justify answers to simple problems. K-1.4 Analyze patterns by reasoning systematically. K-1.5 Generalize mathematical concepts. K-1.6 Use a variety of forms of mathematical communication. K-1.7 Generalize connections among mathematics, the environment, and other subjects. K-1.8 Use multiple informal representations to convey mathematical ideas.</p>	<p>Mathematics Standard K-6 (Data Analysis and Probability): The student will demonstrate through the mathematical processes an emerging sense of organizing and interpret data.</p> <p>Indicators K-6.1 Organize data in graphic displays in the form of drawings and pictures. K-6.2 Interpret data in graphic displays in the form of drawings and pictures.</p>	<p>Mathematics Standard K-2 (Numbers and Operations): The student will demonstrate through the mathematical processes an emerging sense of quantity and numeral relationships, sets, and place values</p> <p>Indicators K-2.2 Translate between numeral and quantity through 31. K-2.3 Compare sets of no more than 31 objects by using the terms more than, less than, and the same as.</p> <p>Standard K-4 (Geometry): The student will demonstrate through the mathematical processes an emerging sense of two- and three-dimensional geometric shapes and relative positions in space.</p> <p>Indicators K-4.4 Use the directional words left, and right to describe movement.</p> <p>Standard K-5 (Measurement): The student will demonstrate through the mathematical processes an emerging sense of coin values and the measurement concepts of length, weight, time, and temperature.</p> <p>Indicators K-5.1 Identify a penny, a nickel, a dime, a quarter, and a dollar and the value of each.</p>

Notes:

Vertical Connections	Cross Curricular Connections
<p>Grade 1 Standard 1-6 (Data Analysis and Probability): The student will demonstrate through the mathematical processes a sense of collecting, organizing and interpreting data and of making predictions on the basis of data. Indicators 1-6.1 Use survey questions to collect data. 1-6.2 Organize data in picture graphs, object graphs, bar graphs, and tables. 1-6.3 Interpret data in picture graphs, object graphs, bar graphs, and tables by using the comparative terms more, less, greater, fewer, greater than, and less than. 1-6.4 Predict on the basis of data whether events are likely or unlikely to occur.</p> <p>Grade 2 Standard 2-6 (Data Analysis and Probability): The student will demonstrate through the mathematical processes an understanding of creating questions to collect data, organizing data, describing trends of a data set, and making predictions based on data. Indicators 2-6.1 Create survey questions to collect data. 2-6.2 Organize data in charts, pictographs, and tables. 2-6.4 Predict on the basis of data whether events are more likely or less likely to occur.</p> <p>Grade 3 Standard 3-6 (Data Analysis and Probability): The student will demonstrate through the mathematical processes an understanding of organizing, interpreting, analyzing and making predictions about data, the benefits of multiple representations of a data set, and the basic concepts of probability. Indicators 3-6.2 Organize data in tables, bar graphs, and dot plots. 3-6.3 Interpret data in tables, bar graphs, pictographs, and dot plots. 3-6.4 Analyze dot plots and bar graphs to make predictions about populations. 3-6.6 Predict on the basis of data whether events are likely, unlikely, certain, or impossible to occur. 3-6.7 Understand when the probability of an event is 0 or 1.</p>	<p>Language Arts Standard K-1 (Reading): The student will begin to read and comprehend a variety of literary texts in print and nonprint formats. Indicators K-1.1 Use pictures and words to make predictions regarding a story read aloud. K-1.7 Create responses to literary texts through a variety of methods such as writing, creative dramatics, and the visual and performing arts. K-1.8 Carry out independent reading for pleasure.</p> <p>Standard K-2 (Reading): The student will begin to read and comprehend a variety of informational texts in print and nonprint formats. Indicators K-2.2 Analyze texts during classroom discussions to make inferences. K-2.4 Create responses to informational texts through a variety of methods such as drawings, written works, and oral presentations. K-2.7 Understand graphic features such as illustrations and graphs.</p> <p>Standard K-4 (Writing): The student will begin to create written work that has a clear focus, sufficient detail, coherent organization, effective use of voice, and correct use of the conventions of written Standard American English. Indicators K-4.1 Generate ideas for writing by using techniques such as participating in conversations and looking at pictures. K-4.2 Generate complete sentences orally. K-4.6 Use strategies to revise small group or whole class writing with teacher support. K-4.7 Use upper case and lower case letters. K-4.8 Use appropriate letter formation when printing.</p> <p>Standard K-5 (Writing): The student will begin to write for a variety of purposes and audiences. Indicators K-5.2 Use drawings, letters, or words to create narratives such as stories and journal entries about people, places, or things. K-5.3 Use drawings, letters, or words to create descriptions of personal experiences, people, places, or things.</p> <p>Standard K-6 (Researching): The student will begin to access and use information from a variety of sources.</p>



	<p>Indicators</p> <p>K-6.1 Generate how and why questions about a topic of interest.</p> <p>K-6.2 Understand that information can be found in print sources such as books, pictures, simple graphs, and charts and nonprint media such as videos, television, films, radio, and the Internet.</p> <p>K-6.3 Classify information by constructing categories such as living and nonliving things.</p> <p>K-6.4 Use complete sentence when orally communicating with others.</p> <p>K-6.5 Understand and follow one- and two-step oral directions.</p> <p>Science</p> <p>Standard K-1 (Scientific Inquiry): The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.</p> <p>Indicators</p> <p>K-1.1 Identify observed objects or events by using the senses.</p> <p>K-1.3 Predict and explain information or events based on observation or previous experiences</p> <p>Social Studies</p> <p>Standard K-5 (Surroundings): The student will demonstrate an understanding of his or her surroundings.</p> <p>Indicators</p> <p>K-4.2 Construct a simple map.</p>
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