

Correlation to South Carolina Academic Standards Mathematics – 2007

Kindergarten Developing Number Concepts: Like and Unlike, Module A

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

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.



Correlation to South Carolina Academic Standards Mathematics – 2007

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

Subconcept: Number quantities can be analyzed using a variety of representations.

Lessons 1, 2, 3, 4, 5, 6, 7, 8, 9

Focus Question: In what ways can sets of objects be compared?

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-1.4 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-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-2.1. Recall numbers, counting forward through 99 and backward from 10. 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>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.</p> <p>Standard K-6 (Data Analysis and Probability): The student will demonstrate through the mathematical processes an emerging sense of organizing and interpreting data.</p> <p>Indicators K-6.1 Organize 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.</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 <i>ten</i>. 1-2.5 Compare whole-number quantities through 100 by using the terms <i>is greater than</i>, <i>is less than</i>, and <i>is equal to</i>.</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. 2-2.4 Compare whole-number quantities through 999 by using the terms <i>is less than</i>, <i>is greater than</i>, and <i>is equal to</i> and the symbols $<$, $>$, and $=$.</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 3-2.1 Compare whole-number quantities through 999,999 by using the terms <i>is less than</i>, <i>is greater than</i>, and <i>is equal to</i> and the symbols $<$, $>$, and $=$.</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.</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-4.6 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.</p> <p>Indicators K-5.1 Use drawings, letters, or words to create written communications such as notes, messages, and lists to inform a specific audience. K-5.3 Use drawings, letters, or words to create narratives such as stories and journal entries about people, places and 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 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. K-6.3 Classify information by constructing categories such as living and nonliving things. K-6.4 Use complete sentence when orally communicating with others. K-6.5 Understand and follow one- and two-step oral directions.</p> <p>Social Studies</p>



	<p>Standard K-4 (Citizenship): The student will demonstrate an understanding good citizenship.</p> <p>Indicators</p> <p>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>
--	--

Notes:

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

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

Lessons 10, 11, 12, 13, 14, 15

Focus Question: What strategies can be used to solve addition 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-2.1 Recall numbers, counting forward through 99 and backward from 10.</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-2.4 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-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> <p>K-3.4 Classify objects according to one or more attributes such as color, size, shape, and thickness.</p> <p>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>

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. 1-2.3 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. 1-2.6 Recall basic addition facts through $9 + 9$ and corresponding subtraction facts. 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.</p> <p>Indicators 2-2.2 Represent quantities in word form through twenty. 2-2.3 Represent multiples of ten in word form through ninety. 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 $=$. 2-2.7 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.</p> <p>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-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-2.2 Analyze texts during classroom discussions to make inferences. K-2.6 Understand that headings and print styles provide information to the reader. 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-4.2 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.</p> <p>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.</p> <p>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>



<p>ninety-nine thousand.</p> <p>3-2.3 Apply an algorithm to add and subtract whole numbers fluently.</p> <p>3-2.9 Analyze the effect that adding, subtracting, or multiplying odd and/or even numbers has on the outcome.</p>	<p>Social Studies</p> <p>Standard K-4 (Citizenship): The student will demonstrate an understanding good citizenship.</p> <p>Indicators</p> <p>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>
---	---

Notes:



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

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

Lessons 16, 17, 18, 19, 20

Focus Question: What strategies can be used to solve 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-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 1-2.6 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, creating 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, 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>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>

Notes:

