

**Math Out of the Box Correlation  
to  
South Carolina Academic Standards  
for  
Mathematics – 2007**

**Kindergarten  
Developing Algebraic Thinking: Rhythm and Design**

In this module, students explore movement and sound patterns with materials such as rhythm sticks. They design their own patterns and investigate adding another element to a repeating pattern. Students sort and classify sets of objects and count the objects. They gather data and display the information in simple tables and graphs. A class journal is kept throughout the pattern and data lessons.

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

Send email to [mootb@clemson.edu](mailto: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: Patterns are in the world around us.**

**Subconcept: Patterns can be created.**

**Lessons 1, 2, 3**

**Focus Question: What attributes can be used to describe patterns?**

Process Standards	Content Standards	Horizontal Connections
<p><b>Mathematics</b>  <b>Standard K-1 (Process):</b>                      The student will have a basic understanding of the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.  <b>Indicators</b>                      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><b>Mathematics</b>  <b>Standard K-3 (Algebra):</b>                      The student will demonstrate through the mathematical processes an emerging sense of repeating and growing patterns and classification based on attributes.  <b>Indicators</b>                      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.                      K-3.4 Classify objects according to one or more attributes such as color, size, shape, and thickness.</p>	<p><b>Mathematics</b>  <b>Standard K-4 (Geometry):</b>                      The student will demonstrate through the mathematical processes an emerging sense of two-and three-dimensional geometric shapes and relative positions in space.  <b>Indicators</b>                      K-4.1 Identify the two-dimensional geometric shapes square, circle, triangle, and rectangle and the three-dimensional shapes cube, sphere, and cylinder.</p>

**Notes:**

Vertical Connections	Cross Curricular Connections
<p><b>Grade 1</b>  <b>Standard 1-3 (Algebra):</b>  The student will demonstrate through the mathematical processes a sense of numeric patterns, the relationship between addition and subtraction, and change over time.  <b>Indicators</b>  1-3.2 Translate patterns into rules for simple addition and subtraction.  1-3.4 Analyze numeric relationships to complete and extend simple patterns.</p> <p><b>Grade 2</b>  <b>Standard 2-3 (Algebra):</b>  The student will demonstrate through the mathematical processes an understanding of numeric patterns and quantitative and qualitative change.  <b>Indicators</b>  2-3.1 Analyze numeric patterns in skip counting that uses the numerals 1 through 10.  2-3.2 Translate patterns into rules for simple multiples.  2-3.3 Analyze relationships to complete and extend growing and repeating patterns involving numbers, symbols, and objects.</p> <p><b>Grade 3</b>  <b>Standard 3-3 (Algebra):</b>  The student will demonstrate through the mathematical processes an understanding of numeric patterns, symbols as representations of unknown quantity, and situations showing increase over time.  <b>Indicators</b>  3-3.1 Create numeric patterns that involve whole-number operations.  3-3.2 Apply procedures to find missing numbers in numeric patterns that involve whole-number operations.  3-3.3 Use symbols to represent an unknown quantity in a simple addition, subtraction, or multiplication equation.</p>	<p><b>Language Arts</b>  <b>Standard K-1 (Reading):</b>  The student will begin to read and comprehend a variety of literary texts in print and nonprint formats.  <b>Indicators</b>  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><b>Standard K-3 (Reading):</b>  The student will learn to read by applying appropriate skills and strategies.  <b>Indicators</b>  K-3.1 Use pictures and context to construct the meaning of unfamiliar words in texts read aloud.  K-3.3 Use vocabulary acquired from a variety of sources (including conversations, texts read-aloud, and the media).  K-3.6 Use appropriate voice level when speaking.  K-3.15 Use prior knowledge and life experiences to construct meaning from texts.</p> <p><b>Standard K-4 (Writing):</b>  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.  <b>Indicators</b>  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-4.7 Use upper case and lower case letters.  K-4.8 Use appropriate letter formation when printing.</p> <p><b>Standard K-5 (Writing):</b>  The student will begin to write for a variety of purposes and audiences.  <b>Indicators</b>  K-5.2 Use drawings, letters, or words to create narratives such as stories and journal entries about people, places, things.</p> <p><b>Standard K-6 (Researching):</b>  The student will begin to access and use information from a variety of sources.  <b>Indicators</b>  K-6.2 Understand that information can be found in print sources such as books, pictures, simple graphs, and</p>



	<p>charts in non-print media such as videos, television, films, radio, and the Internet.</p> <p>K-6.4 Use complete sentences when orally communicating with others.</p> <p>K-6.5 Understand and follow one- and two-step oral directions.</p> <p><b>Science</b>  <b>Standard K-5 (Exploring Matter):</b>  The student will demonstrate the understanding that objects can be described by their observable properties (Physical Science)  <b>Indicators</b>  K-5.1 Classify objects by observable properties (including size, color, shape, magnetic attraction, heaviness, texture, and the ability to float in water).</p> <p><b>Social Studies</b>  <b>Standard K-4 (Citizenship):</b>  The student will demonstrate an understanding of good citizenship.  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><b>Visual and Performing Arts</b>  <b>Standard Grade K (Visual Arts)</b>  I. Understanding and applying media techniques and processes.  <b>Indicators</b>  C. Use art materials and tools in a safe and responsible manner.</p>
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**Notes:**

**Big Idea: Patterns are in the world around us.**

**Subconcept: Repeating patterns can be represented in many ways.**

**Lessons 4, 5, 6**

**Focus Question: In what ways are repeating patterns growing?**

Process Standards	Content Standards	Horizontal Connections
<p><b>Mathematics</b>  <b>Standard K-1 (Process):</b>                      The student will have a basic understanding of the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.  <b>Indicators</b>                      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><b>Mathematics</b>  <b>Standard K-3 (Algebra):</b>                      The student will demonstrate through the mathematical processes an emerging sense of repeating and growing patterns and classification based on attributes.  <b>Indicators</b>                      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><b>Mathematics</b>  <b>Standard K-4 (Geometry):</b>                      The student will demonstrate through the mathematical processes an emerging sense of two-and three-dimensional geometric shapes and relative positions in space.  <b>Indicators</b>                      K-4.1 Identify the two-dimensional geometric shapes square, circle, triangle, and rectangle and the three-dimensional shapes cube, sphere, and cylinder.                      K-4.4 Use the directional words <i>left</i>, and <i>right</i> to describe movement.</p>

**Notes:**

Vertical Connections	Cross Curricular Connections
<p><b>Grade 1</b>  <b>Standard 1-3 (Algebra):</b>  The student will demonstrate through the mathematical processes a sense of numeric patterns, the relationship between addition and subtraction, and change over time.  <b>Indicators</b>  1-3.2 Translate patterns into rules for simple addition and subtraction.  1-3.4 Analyze numeric relationships to complete and extend simple patterns.</p> <p><b>Grade 2</b>  <b>Standard 2-3 (Algebra):</b>  The student will demonstrate through the mathematical processes an understanding of numeric patterns and quantitative and qualitative change.  <b>Indicators</b>  2-3.1 Analyze numeric patterns in skip counting that uses the numerals 1 through 10.  2-3.2 Translate patterns into rules for simple multiples.  2-3.3 Analyze relationships to complete and extend growing and repeating patterns involving numbers, symbols, and objects.</p> <p><b>Grade 3</b>  <b>Standard 3-3 (Algebra):</b>  The student will demonstrate through the mathematical processes an understanding of numeric patterns, symbols as representations of unknown quantity, and situations showing increase over time.  <b>Indicators</b>  3-3.1 Create numeric patterns that involve whole-number operations.  3-3.2 Apply procedures to find missing numbers in numeric patterns that involve whole-number operations.  3-3.3 Use symbols to represent an unknown quantity in a simple addition, subtraction, or multiplication equation.</p>	<p><b>Language Arts</b>  <b>Standard K-1 (Reading):</b>  The student will begin to read and comprehend a variety of literary texts in print and nonprint formats.  <b>Indicators</b>  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><b>Standard K-4 (Writing):</b>  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.  <b>Indicators</b>  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-4.7 Use upper case and lower case letters.  K-4.8 Use appropriate letter formation when printing.</p> <p><b>Standard K-5 (Writing):</b>  The student will begin to write for a variety of purposes and audiences.  <b>Indicators</b>  K-5.1 Use drawings, letters, or words to create written communications such as notes, messages, and lists to inform a specific audience.  K-5.2 Use drawings, letters, or words to create narratives such as stories and journal entries about people, places, or things.</p> <p><b>Standard K-6 (Researching):</b>  The student will begin to access and use information from a variety of sources.  <b>Indicators</b>  K-6.2 Understand that information can be found in print sources such as books, pictures, simple graphs, and charts in non-print media such as videos, television, films, radio, and the Internet.  K-6.4 Use complete sentences when orally communicating with others.  K-6.5 Understand and follow one- and two-step oral directions.</p> <p><b>Social Studies</b>  <b>Standard K-4 (Citizenship):</b>  The student will demonstrate an understanding of good citizenship.</p>



	<p><b>Indicators</b> 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><b>Visual and Performing Arts</b> <b>Standard Grade K (Music)</b> II. Performing on instruments, of a varied repertoire of music. <b>Indicators</b> D. Echo short rhythmic and melodic patterns.</p> <p><b>Standard Grade K (Music)</b> III. Improvising melodies, variations, and accompaniments. <b>Indicators</b> C. Improvise simple rhythmic accompaniments using body percussion and classroom instruments.</p> <p><b>Standard Grade K (Dance)</b> I. Identifying and demonstrating movement elements and skills in performing dance. <b>Indicators</b> F. Safely maintain personal and general space while moving. I. Demonstrate kinesthetic awareness by moving body parts in isolation.</p>
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**Notes:**



**Big Idea: Patterns are in the world around us.**

**Subconcept: Repeating patterns can be analyzed and described.**

**Lessons 7, 8, 9, 10**

**Focus Question: What patterns can be observed outdoors?**

<b>Process Standards</b>	<b>Content Standards</b>	<b>Horizontal Connections</b>
<p><b>Mathematics</b>  <b>Standard K-1 (Process):</b>                      The student will have a basic understanding of the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.  <b>Indicators</b>                      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><b>Mathematics</b>  <b>Standard K-3 (Algebra):</b>                      The student will demonstrate through the mathematical processes an emerging sense of repeating and growing patterns and classification based on attributes.  <b>Indicators</b>                      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.                      K-3.4 Classify objects according to one or more attributes such as color, size, shape, and thickness.</p>	<p><b>Mathematics</b>  <b>Standard K-4 (Geometry):</b>                      The student will demonstrate through the mathematical processes an emerging sense of two-and three-dimensional geometric shapes and relative positions in space.  <b>Indicators</b>                      K-4.1 Identify the two-dimensional geometric shapes square, circle, triangle, and rectangle and the three-dimensional shapes cube, sphere, and cylinder.                      K-4.2 Represent two-dimensional geometric shapes.                      K-4.4 Use the directional words <i>left</i>, and <i>right</i> to describe movement.</p>

**Notes:**

Vertical Connections	Cross Curricular Connections
<p><b>Grade 1</b>  <b>Standard 1-3 (Algebra):</b>  The student will demonstrate through the mathematical processes a sense of numeric patterns, the relationship between addition and subtraction, and change over time.  <b>Indicators</b>  1-3.2 Translate patterns into rules for simple addition and subtraction.  1-3.4 Analyze numeric relationships to complete and extend simple patterns.</p> <p><b>Grade 2</b>  <b>Standard 2-3 (Algebra):</b>  The student will demonstrate through the mathematical processes an understanding of numeric patterns and quantitative and qualitative change.  <b>Indicators</b>  2-3.1 Analyze numeric patterns in skip counting that uses the numerals 1 through 10.  2-3.2 Translate patterns into rules for simple multiples.  2-3.3 Analyze relationships to complete and extend growing and repeating patterns involving numbers, symbols, and objects.</p> <p><b>Grade 3</b>  <b>Standard 3-3 (Algebra):</b>  The student will demonstrate through the mathematical processes an understanding of numeric patterns, symbols as representations of unknown quantity, and situations showing increase over time.  <b>Indicators</b>  3-3.1 Create numeric patterns that involve whole-number operations.  3-3.2 Apply procedures to find missing numbers in numeric patterns that involve whole-number operations.  3-3.3 Use symbols to represent an unknown quantity in a simple addition, subtraction, or multiplication equation.</p>	<p><b>Language Arts</b>  <b>Standard K-1 (Reading):</b>  The student will begin to read and comprehend a variety of literary texts in print and nonprint formats.  <b>Indicators</b>  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><b>Standard K-3 (Reading):</b>  The student will learn to read by applying appropriate skills and strategies.  <b>Indicators</b>  K-3.1 Use pictures and context to construct the meaning of unfamiliar words in texts read aloud.  K-3.3 Use vocabulary acquired from a variety of sources (including conversations, texts read-aloud, and the media).  K-3.6 Use appropriate voice level when speaking.  K-3.15 Use prior knowledge and life experiences to construct meaning from texts.</p> <p><b>Standard K-4 (Writing):</b>  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.  <b>Indicators</b>  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-4.7 Use upper case and lower case letters.  K-4.8 Use appropriate letter formation when printing.</p> <p><b>Standard K-5 (Writing):</b>  The student will begin to write for a variety of purposes and audiences.  <b>Indicators</b>  K-5.1 Use drawings, letters, or words to create written communications such as notes, messages, and lists to inform a specific audience.  K-5.2 Use drawings, letters, or words to create narratives such as stories and journal entries about people, places, or things.</p> <p><b>Standard K-6 (Researching):</b>  The student will begin to access and use information from a variety of sources.  <b>Indicators</b></p>



	<p>K-6.2 Understand that information can be found in print sources such as books, pictures, simple graphs, and charts in non-print media such as videos, television, films, radio, and the Internet.</p> <p>K-6.4 Use complete sentences when orally communicating with others.</p> <p>K-6.5 Understand and follow one- and two-step oral directions.</p> <p><b>Social Studies</b>  <b>Standard K-4 (Citizenship):</b>  The student will demonstrate an understanding of good citizenship.</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> <p><b>Visual and Performing Arts</b>  <b>Standard Grade K (Music)</b>  II. Performing on instruments, of a varied repertoire of music.</p> <p><b>Indicators</b>  D. Echo short rhythmic and melodic patterns.</p> <p><b>Standard Grade K (Music)</b>  III. Improvising melodies, variations, and accompaniments.</p> <p><b>Indicators</b>  C. Improvise simple rhythmic accompaniments using body percussion and classroom instruments.</p> <p><b>Standard Grade K (Dance)</b>  I. Identifying and demonstrating movement elements and skills in performing dance.</p> <p><b>Indicators</b>  F. Safely maintain personal and general space while moving.  I. Demonstrate kinesthetic awareness by moving body parts in isolation.</p> <p><b>Standard Grade K (Visual Arts)</b>  I. Understanding and applying media techniques and processes.</p> <p><b>Indicators</b>  C. Use art materials and tools in a safe and responsible manner.</p> <p><b>Standard Grade K (Visual Arts)</b>  VI. Making connections between visual arts and other disciplines.</p> <p><b>Indicators</b>  B. Begin to identify connections between the visual arts and content areas across the curriculum.</p>
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**Notes:**

**Big Idea: Data can be collected about the world around us.**

**Subconcept: Collections can be sorted according to a rule.**

**Lessons 11, 12, 13**

**Focus Question: What attributes can be used to sort a collection?**

Process Standards	Content Standards	Horizontal Connections
<p><b>Mathematics</b>  <b>Standard K-1 (Process):</b>            The student will have a basic understanding of the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.  <b>Indicators</b>            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><b>Mathematics</b>  <b>Standard K-6 (Data Analysis and Probability):</b>            The student will demonstrate through the mathematical processes an emerging sense of organizing and interpreting data.  <b>Indicators</b>            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><b>Mathematics</b>  <b>Standard K-2 (Number and Operations):</b>            The student will demonstrate through the mathematical processes an emerging sense of quantity and numeral relationships, sets, and place values.  <b>Indicators</b>            K-2.3 Compare sets of no more than 31 objects by using the terms <i>more than</i>, <i>less than</i>, and <i>the same as</i>.   <b>Standard K-3 (Algebra):</b>            The student will demonstrate through the mathematical processes an emerging sense of repeating and growing patterns and classification based on attributes.  <b>Indicators</b>            K-3.4 Classify objects according to one or more attributes such as color, size, shape, and thickness.</p>

**Notes:**

Vertical Connections	Cross Curricular Connections
<p><b>Grade 1</b>  <b>Standard 1-6 (Data Analysis and Probability):</b>  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.  <b>Indicators</b>  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.</p> <p><b>Grade 2</b>  <b>Standard 2-6 (Data Analysis and Probability):</b>  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.  <b>Indicators</b>  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><b>Grade 3</b>  <b>Standard 3-6 (Data Analysis and Probability):</b>  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.  <b>Indicators</b>  3-6.1 Apply a procedure to find the range of a data set.  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.  3-6.5 Compare the benefits of using tables, bar graphs, and dot plots as representations of a given data set.</p>	<p><b>Language Arts</b>  <b>Standard K-1 (Reading):</b>  The student will begin to read and comprehend a variety of literary texts in print and nonprint formats.  <b>Indicators</b>  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><b>Standard K-3 (Reading):</b>  The student will learn to read by applying appropriate skills and strategies.  <b>Indicators</b>  K-3.1 Use pictures and context to construct the meaning of unfamiliar words in texts read aloud.  K-3.3 Use vocabulary acquired from a variety of sources (including conversations, texts read-aloud, and the media).  K-3.6 Use appropriate voice level when speaking.  K-3.15 Use prior knowledge and life experiences to construct meaning from texts.</p> <p><b>Standard K-4 (Writing):</b>  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.  <b>Indicators</b>  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.</p> <p><b>Standard K-6 (Researching):</b>  The student will begin to access and use information from a variety of sources.  <b>Indicators</b>  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 sentences when orally communicating with others.  K-6.5 Understand and follow one- and two-step oral directions.</p> <p><b>Science</b>  <b>Standard K-1 (Scientific Inquiry):</b></p>

	<p>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><b>Indicators</b> K-1.1 Identify observed objects or events by using the senses.</p> <p><b>Standard K-2: (Characteristics of Organisms):</b> The student will demonstrate an understanding of the characteristics of organisms. (Life Science)</p> <p><b>Standard K-5 (Exploring Matter):</b> The student will demonstrate the understanding that objects can be described by their observable properties. (Physical Science)</p> <p><b>Indicators</b> K-5.1 Classify objects by observable properties.</p> <p><b>Social Studies</b> <b>Standard K-4 (Citizenship):</b> The student will demonstrate an understanding of good citizenship.</p> <p><b>Indicators</b> 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>
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**Notes:**

**Big Idea: Data can be collected about the world around us.**  
**Subconcept: Counts can be made of data that have been gathered.**  
**Lessons 14, 15, 16**

**Focus Questions: What strategies can be used to count sets?**

Process Standards	Content Standards	Horizontal Connections
<p><b>Mathematics</b>  <b>Standard K-1 (Process):</b>            The student will have a basic understanding of the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.  <b>Indicators</b>            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><b>Mathematics</b>  <b>Standard K-6 Data Analysis and Probability):</b>            The student will demonstrate through the mathematical processes an emerging sense of organizing and interpreting data.  <b>Indicators</b>            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><b>Mathematics</b>  <b>Standard K-2 (Numbers and Operations):</b>            The student will demonstrate through the mathematical processes an emerging sense of quantity and numeral relationships, sets, and place values.  <b>Indicators</b>            K-2.3 Compare sets of no more than 31 objects by using the terms <i>more than</i>, <i>less than</i>, and <i>the same as</i>.   <b>Standard K-3 (Algebra):</b>            The student will demonstrate through the mathematical processes an emerging sense of repeating and growing patterns and classification based on attributes.  <b>Indicators</b>            K-3.4 Classify objects according to one or more attributes such as color, size, shape, and thickness.</p>

**Notes:**

Vertical Connections	Cross Curricular Connections
<p><b>Grade 1</b>  <b>Standard 1-6 (Data Analysis and Probability):</b>  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.  <b>Indicators</b>  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.</p> <p><b>Grade 2</b>  <b>Standard 2-6 (Data Analysis and Probability):</b>  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.  <b>Indicators</b>  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><b>Grade 3</b>  <b>Standard 3-6 (Data Analysis and Probability):</b>  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.  <b>Indicators</b>  3-6.1 Apply a procedure to find the range of a data set.  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.  3-6.5 Compare the benefits of using tables, bar graphs, and dot plots as representations of a given data set.</p>	<p><b>Language Arts</b>  <b>Standard K-1 (Reading):</b>  The student will begin to read and comprehend a variety of literary texts in print and nonprint formats.  <b>Indicators</b>  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><b>Standard K-4 (Writing):</b>  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.  <b>Indicators</b>  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-4.7 Use uppercase and lowercase letters.  K-4.8 Use appropriate letter formation when printing.</p> <p><b>Standard K-5 (Writing):</b>  The student will begin to write for a variety of purposes and audiences.  <b>Indicators</b>  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 descriptions of personal experiences, people, places, or things.</p> <p><b>Standard K-6 (Researching):</b>  The student will begin to access and use information from a variety of sources.  <b>Indicators</b>  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 sentences when orally communicating with others.  K-6.5 Understand and follow one- and two-step oral directions.</p> <p><b>Science</b>  <b>Standard K-1 (Scientific Inquiry):</b>  The student will demonstrate an understanding of scientific</p>



	<p>inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.</p> <p><b>Indicators</b> K-1.3 Predict and explain information or events based on observation or previous experience.</p> <p><b>Standard K-5 (Exploring Matter):</b> The student will demonstrate the understanding that objects can be described by their observable properties. (Physical Science)</p> <p><b>Indicators</b> K-5.1 Classify objects by observable properties.</p> <p><b>Social Studies</b> <b>Standard K-4 (Citizenship):</b> The student will demonstrate an understanding of good citizenship.</p> <p><b>Indicators</b> 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>
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**Notes:**

**Big Idea: Data can be collected about the world around us.**

**Subconcept: Data can be displayed and analyzed.**

**Lessons 17, 18, 19, 20**

**Focus Question: What displays can be used to organize data?**

Process Standards	Content Standards	Horizontal Connections
<p><b>Mathematics</b>  <b>Standard K-1 (Process):</b>            The student will have a basic understanding of the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.  <b>Indicators</b>            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><b>Mathematics</b>  <b>Standard K-6 (Data Analysis and Probability):</b>            The student will demonstrate through the mathematical processes an emerging sense of organizing and interpreting data.  <b>Indicators</b>            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><b>Mathematics</b>  <b>Standard K-2 (Numbers and Operations):</b>            The student will demonstrate through the mathematical processes an emerging sense of quantity and numeral relationships, sets, and place values.  <b>Indicators</b>            K-2.3 Compare sets of no more than 31 objects by using the terms <i>more than</i>, <i>less than</i>, and <i>the same as</i>.   <b>Standard K-3 (Algebra):</b>            The student will demonstrate through the mathematical processes an emerging sense of repeating and growing patterns and classification based on attributes.  <b>Indicators</b>            K-3.4 Classify objects according to one or more attributes such as color, size, shape, and thickness.   <b>Standard K-4 (Geometry):</b>            The student will demonstrate through the mathematical processes an emerging sense of two- and three-dimensional geometric shapes and relative positions in space.  <b>Indicators</b>            K-4.1 Identify the two-dimensional geometric shapes square, circle, triangle, and rectangle and the three-dimensional shapes cube, sphere, and cylinder.</p>

**Notes:**

Vertical Connections	Cross Curricular Connections
<p><b>Grade 1</b>  <b>Standard 1-6 (Data Analysis and Probability):</b>  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.  <b>Indicators</b>  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.</p> <p><b>Grade 2</b>  <b>Standard 2-6 (Data Analysis and Probability):</b>  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.  <b>Indicators</b>  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><b>Grade 3</b>  <b>Standard 3-6 (Data Analysis and Probability):</b>  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.  <b>Indicators</b>  3-6.1 Apply a procedure to find the range of a data set.  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.  3-6.5 Compare the benefits of using tables, bar graphs, and dot plots as representations of a given data set.</p>	<p><b>Language Arts</b>  <b>Standard K-1 (Reading):</b>  The student will begin to read and comprehend a variety of literary texts in print and nonprint formats.  <b>Indicators</b>  K-2.7 Understand graphic features such as illustrations and graphs.</p> <p><b>Standard K-2 (Reading):</b>  The student will begin to read and comprehend a variety of informational texts in print and nonprint formats.  <b>Indicators</b>  K-2.2 Analyze texts during classroom discussions to make inferences.  K-2.7 Understand graphic features such as illustrations and graphs.</p> <p><b>Standard K-4 (Writing):</b>  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.  <b>Indicators</b>  K-4.1 Generate ideas for writing by using techniques such as participating in conversations and looking at pictures.  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.</p> <p><b>Standard K-5 (Writing):</b>  The student will begin to write for a variety of purposes and audiences.  <b>Indicators</b>  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><b>Science</b>  <b>Standard K-1 (Scientific Inquiry):</b>  The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.  <b>Indicators</b>  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>



	<p><b>Standard K-5 (Exploring Matter):</b>  The student will demonstrate the understanding that objects can be described by their observable properties. (Physical Science)</p> <p><b>Indicators</b>  K-5.1 Classify objects by observable properties.</p> <p><b>Social Studies (Citizenship):</b>  <b>Standard K-4:</b>  The student will demonstrate an understanding of good citizenship.</p> <p><b>Indicators</b>  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>
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