

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

**Grade Three
Developing Number Concepts: Ordering and Arranging
Module B**

Students explore concrete and pictorial models representing decimals and fractions. They plan, describe, and test problem-solving strategies and analyze the results. The study of probability using spinners and other manipulatives is included in this kit. Concepts used in discrete mathematics are developed. A Student Record Book supports the lessons by providing reflective practice and connections between mathematical concepts.

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: Meaning for fractional relationships can be developed by constructing a variety of models.

Lessons 1, 2, 3, 4

Focus Question: What are examples of fractions as parts of a whole?

Process Standards	Content Standards	Horizontal Connections
<p>Mathematics Standard 3-1 (Process): The student will understand and utilize the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.</p> <p>Indicators</p> <p>3-1.1 Analyze information to solve increasingly more sophisticated problems.</p> <p>3-1.2 Construct arguments that lead to conclusions about general mathematical properties and relationships.</p> <p>3-1.3 Explain and justify answers on the basis of mathematical properties, structures, and relationships.</p> <p>3-1.4 Generate descriptions and mathematical statements about relationships between and among classes of objects.</p> <p>3-1.5 Use correct, complete, and clearly written and oral mathematical language to pose questions, communicate ideas, and extend problem situations.</p> <p>3-1.6 Generalize connections between new mathematical ideas and related concepts and subjects that have been previously considered.</p> <p>3-1.7 Use flexibility in mathematical representations.</p> <p>3-1.8 Recognize the limitations of various forms of mathematical representations.</p>	<p>Mathematics 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</p> <p>3-2.5 Understand fractions as parts of a whole.</p> <p>3-2.6 Represent fractions that are greater than or equal to 1.</p>	<p>Mathematics Standard 3-4 (Geometry): The student will demonstrate through the mathematical processes an understanding of the connection between the identification of basic attributes and the classification of two-dimensional shapes.</p> <p>Indicators</p> <p>3-4.2 Classify polygons as either triangles, quadrilaterals, pentagons, hexagons, or octagons according to the number of their sides.</p>

Notes:

Vertical Connections	Cross Curricular Connections
<p>Grade 4 Standard 4-2 (Number and Operations): The student will demonstrate through the mathematical processes an understanding of decimal notation as an extension of the place-value system; the relationships between fractions and decimals; the multiplication of whole numbers; and accurate, efficient, and generalizable methods of dividing whole numbers, adding decimals, and subtracting decimals.</p> <p>Indicators 4-2.8 Apply strategies and procedures to find equivalent forms of fractions. 4-2.9 Compare the relative size of fractions to the benchmarks 0, $\frac{1}{2}$, and 1.</p> <p>Grade 5 Standard 5-2 (Numbers and Operations): The student will demonstrate through the mathematical processes an understanding of the place value system; the division of whole numbers; the addition and subtraction of decimals; the relationships among whole numbers, fractions, and decimals; and accurate, efficient, and generalizable methods of adding and subtracting fractions.</p> <p>Indicators 5-2.4 Compare whole numbers, decimals, and fractions by using the symbols $<$, $>$, and $=$. 5-2.7 Generate strategies to find the greatest common factor and the least common multiple of two whole numbers. 5-2.8 Generate strategies to add and subtract fractions with like and unlike denominators.</p> <p>Grade 6 Standard 6-2 (Numbers and Operations): The student will demonstrate through the mathematical processes an understanding of the concept of whole-number percentages, integers, and ratio and rate; the addition and subtraction of fractions; accurate, efficient, and generalizable methods of multiplying and dividing fractions and decimals; and the use of exponential notation to represent whole numbers.</p> <p>Indicators 6-2.3 Compare rational numbers and whole-number percentages through 100 by using the symbols \leq, \geq, $<$, $>$, and $=$. 6-2.4 Apply an algorithm to add and subtract fractions. 6-2.5 Generate strategies to multiply and divide fractions and decimals.</p>	<p>Language Arts Standard 3-1 (Reading): The student will read and comprehend a variety of literary texts in print and nonprint formats.</p> <p>Indicators 3-1.1 Analyze a given literary text to make, revise, and confirm predictions and draw conclusions. 3-1.7 Create responses to literary texts through a variety of methods such as writing, creative dramatics, and the visual and performing arts. 3-1.8 Carry out independent reading for extended periods of time to derive pleasure.</p> <p>Standard 3-4 (Writing): The student will 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 3-4.1 Use prewriting techniques such as creating lists, having discussions, using graphic organizers, and using literary models to organize written works. 3-4.2 Use complete sentences (including compound sentences) in writing. 3-4.6 Use revision strategies to improve word choice and the logical progression of ideas in written works.</p>



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

Subconcept: Meaning for decimals can be developed by constructing a variety of models.

Lessons 5, 6, 7

Focus Question: In what ways are fractions and decimals alike?

Process Standards	Content Standards	Horizontal Connections
<p>Mathematics Standard 3-1 (Process): The student will understand and utilize the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.</p> <p>Indicators</p> <p>3-1.1 Analyze information to solve increasingly more sophisticated problems.</p> <p>3-1.2 Construct arguments that lead to conclusions about general mathematical properties and relationships.</p> <p>3-1.3 Explain and justify answers on the basis of mathematical properties, structures, and relationships.</p> <p>3-1.4 Generate descriptions and mathematical statements about relationships between and among classes of objects.</p> <p>3-1.5 Use correct, complete, and clearly written and oral mathematical language to pose questions, communicate ideas, and extend problem situations.</p> <p>3-1.6 Generalize connections between new mathematical ideas and related concepts and subjects that have been previously considered.</p> <p>3-1.7 Use flexibility in mathematical representations.</p> <p>3-1.8 Recognize the limitations of various forms of mathematical representations.</p>	<p>Mathematics 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</p> <p>3-2.5 Understand fractions as parts of a whole.</p> <p>3-2.6 Represent fractions that are greater than or equal to 1.</p>	<p>Mathematics Standard 3-3 (Algebra): 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.</p> <p>Indicators</p> <p>3-3.1 Create numeric patterns that involve whole-number operations.</p> <p>3-3.2 Apply procedures to find missing numbers in numeric patterns that involve whole-number operations.</p> <p>3-3.3 Use symbols to represent an unknown quantity in a simple addition, subtraction, or multiplication equation.</p>

Vertical Connections	Cross Curricular Connections
<p>Grade 4 Standard 4-2 (Number and Operations): The student will demonstrate through the mathematical processes an understanding of decimal notation as an extension of the place-value system; the relationships between fractions and decimals; the multiplication of whole numbers; and accurate, efficient, and generalizable methods of dividing whole numbers, adding decimals, and subtracting decimals. Indicators 4-2.6 Analyze the magnitude of digits through hundredths on the basis of their place value. 4-2.7 Compare decimals through hundredths by using the terms <i>is less than</i>, <i>is greater than</i>, and <i>is equal to</i> and the symbols $<$, $>$, and $=$. 4-2.8 Apply strategies and procedures to find equivalent forms of fractions. 4-2.11 Represent improper fractions, mixed numbers, and decimals.</p> <p>Grade 5 Standard 5-2 (Numbers and Operations): The student will demonstrate through the mathematical processes an understanding of the place value system; the division of whole numbers; the addition and subtraction of decimals; the relationships among whole numbers, fractions, and decimals; and accurate, efficient, and generalizable methods of adding and subtracting fractions. Indicators 5-2.4 Compare whole numbers, decimals, and fractions by using the symbols $<$, $>$, and $=$. 5-2.7 Generate strategies to find the greatest common factor and the least common multiple of two whole numbers. 5-2.8 Generate strategies to add and subtract fractions with like and unlike denominators.</p> <p>Grade 6 Standard 6-2 (Numbers and Operations): The student will demonstrate through the mathematical processes an understanding of the concept of whole-number percentages, integers, and ratio and rate; the addition and subtraction of fractions; accurate, efficient, and generalizable methods of multiplying and dividing fractions and decimals; and the use of exponential notation to represent whole numbers. Indicators 6-2.3 Compare rational numbers and whole-number percentages through 100 by using the symbols \leq, \geq, $<$, $>$, and $=$. 6-2.4 Apply an algorithm to add and subtract fractions. 6-2.5 Generate strategies to multiply and divide fractions and decimals.</p>	<p>Language Arts Standard 3-1 (Reading): The student will read and comprehend a variety of literary texts in print and nonprint formats. Indicators 3-1.1 Analyze a given literary text to make, revise, and confirm predictions and draw conclusions. 3-1.7 Create responses to literary texts through a variety of methods such as writing, creative dramatics, and the visual and performing arts. 3-1.8 Carry out independent reading for extended periods of time to derive pleasure.</p> <p>Standard 3-4 (Writing): The student will 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 3-4.1 Use prewriting techniques such as creating lists, having discussions, using graphic organizers, and using literary models to organize written works. 3-4.2 Use complete sentences (including compound sentences) in writing. 3-4.6 Use revision strategies to improve word choice and the logical progression of ideas in written works.</p>



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

Subconcept: Attributes of money can be analyzed, described, and modeled.

Lessons 8, 9, 10, 11, 12

Focus Question: What strategies can be used to solve addition and subtraction problems with decimal numbers?

Process Standards	Content Standards	Horizontal Connections
<p>Mathematics Standard 3-1 (Process): The student will understand and utilize the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.</p> <p>Indicators</p> <p>3-1.1 Analyze information to solve increasingly more sophisticated problems.</p> <p>3-1.2 Construct arguments that lead to conclusions about general mathematical properties and relationships.</p> <p>3-1.3 Explain and justify answers on the basis of mathematical properties, structures, and relationships.</p> <p>3-1.4 Generate descriptions and mathematical statements about relationships between and among classes of objects.</p> <p>3-1.5 Use correct, complete, and clearly written and oral mathematical language to pose questions, communicate ideas, and extend problem situations.</p> <p>3-1.6 Generalize connections between new mathematical ideas and related concepts and subjects that have been previously considered.</p> <p>3-1.7 Use flexibility in mathematical representations.</p> <p>3-1.8 Recognize the limitations of various forms of mathematical representations.</p>	<p>Mathematics Standards 3-5 (Measurement): The student will demonstrate through the mathematical processes an understanding of length, time, weight, and liquid volume measurements; the relationships between systems of measure; accurate, efficient, and generalizable methods of determining the perimeters of polygon; and the values and combinations of coins required to make change.</p> <p>Indicators</p> <p>3-5.1 Use the fewest possible number of coins when making change.</p>	<p>Mathematics 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</p> <p>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>3-2.3 Apply an algorithm to add and subtract whole numbers fluently.</p> <p>3-2.12 Analyze the magnitude of digits through 999,999 on the basis of their place value.</p>

Vertical Connections	Cross Curricular Connections
<p>Grade 4 Standard 4-2 (Number and Operations): The student will demonstrate through the mathematical processes an understanding of decimal notation as an extension of the place-value system; the relationships between fractions and decimals; the multiplication of whole numbers; and accurate, efficient, and generalizable methods of dividing whole numbers, adding decimals, and subtracting decimals.</p> <p>Indicators</p> <p>4-2.6 Analyze the magnitude of digits through hundredths on the basis of their place value.</p> <p>4-2.10 Identify the common fraction/decimal equivalents $\frac{1}{2} = .5$, $\frac{1}{4} = .25$, $\frac{3}{4} = .75$, $\frac{1}{3} \approx .33$, $\frac{2}{3} \approx .67$, multiples of $\frac{1}{10}$, and multiples of $\frac{1}{100}$.</p> <p>4-2.11 Represent improper fractions, mixed numbers, and decimals.</p> <p>4-2.12 Generate strategies to add and subtract decimals through hundredths.</p> <p>Grade 5 Standard 5-2 (Numbers and Operations): The student will demonstrate through the mathematical processes an understanding of the place value system; the division of whole numbers; the addition and subtraction of decimals; the relationships among whole numbers, fractions, and decimals; and accurate, efficient, and generalizable methods of adding and subtracting fractions.</p> <p>Indicators</p> <p>5-2.4 Compare whole numbers, decimals, and fractions by using the symbols $<$, $>$, and $=$.</p> <p>5-2.7 Generate strategies to find the greatest common factor and the least common multiple of two whole numbers.</p> <p>5-2.8 Generate strategies to add and subtract fractions with like and unlike denominators.</p> <p>Grade 6 Standard 6-2 (Numbers and Operations): The student will demonstrate through the mathematical processes an understanding of the concept of whole-number percentages, integers, and ratio and rate; the addition and subtraction of fractions; accurate, efficient, and generalizable methods of multiplying and dividing fractions and decimals; and the use of exponential notation to represent whole numbers.</p> <p>Indicators</p> <p>6-2.3 Compare rational numbers and whole-number percentages through 100 by using the symbols \leq, \geq, $<$, $>$, and $=$.</p> <p>6-2.4 Apply an algorithm to add and subtract fractions.</p> <p>6-2.5 Generate strategies to multiply and divide fractions and decimals.</p>	<p>Language Arts Standard 3-2 (Reading): The student will read and comprehend a variety of informational texts in print and nonprint formats.</p> <p>Indicators</p> <p>3-2.2 Analyze informational texts to draw conclusions and make inferences.</p> <p>3-2.4 Create responses to informational texts through a variety of methods such as drawings, written works, and oral presentations.</p> <p>3-2.5 Carry out independent reading for extended periods of time to gain information.</p> <p>3-2.7 Use graphic features such as illustrations, graphs, charts, maps, diagrams, and graphic organizers as sources of information.</p> <p>Standard 3-4 (Writing): The student will 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</p> <p>3-4.1 Use prewriting techniques such as creating lists, having discussions, using graphic organizers, and using literary models to organize written works.</p> <p>3-4.2 Use complete sentences (including compound sentences) in writing.</p> <p>3-4.6 Use revision strategies to improve word choice and the logical progression of ideas in written works.</p>



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 13, 14, 15, 16, 17

Focus Question: In what way does a number line aid in describing probability?

Process Standards	Content Standards	Horizontal Connections
<p>Mathematics Standard 3-1 (Process): The student will understand and utilize the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation.</p> <p>Indicators</p> <p>3-1.1 Analyze information to solve increasingly more sophisticated problems.</p> <p>3-1.2 Construct arguments that lead to conclusions about general mathematical properties and relationships.</p> <p>3-1.3 Explain and justify answers on the basis of mathematical properties, structures, and relationships.</p> <p>3-1.4 Generate descriptions and mathematical statements about relationships between and among classes of objects.</p> <p>3-1.5 Use correct, complete, and clearly written and oral mathematical language to pose questions, communicate ideas, and extend problem situations.</p> <p>3-1.6 Generalize connections between new mathematical ideas and related concepts and subjects that have been previously considered.</p> <p>3-1.7 Use flexibility in mathematical representations.</p> <p>3-1.8 Recognize the limitations of various forms of mathematical representations.</p>	<p>Mathematics 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.</p> <p>Indicators</p> <p>3-6.2 Organize data in tables, bar graphs, and dot plots.</p> <p>3-6.3 Interpret data in tables, bar graphs, pictographs, and dot plots.</p> <p>3-6.6 Predict on the basis of data whether events are <i>likely</i>, <i>unlikely</i>, <i>certain</i>, or <i>impossible</i> to occur.</p> <p>3-6.7 Understand when the probability of an event is 0 or 1.</p>	<p>Mathematics 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</p> <p>3-2.5 Understand fractions as parts of a whole.</p> <p>3-2.6 Represent fractions that are greater than or equal to 1.</p>

Notes:

Vertical Connections	Cross Curricular Connections
<p>Grade 4 Standard 4-6: (Data Analysis and Probability) The student will demonstrate through the mathematical processes an understanding of the impact of data-collection methods, the appropriate graph for categorical or numerical data, and the analysis of possible outcomes for a simple event.</p> <p>Indicators 4-6.1 Compare how data-collection methods impact survey results. 4-6.6 Predict on the basis of data whether events are <i>likely</i>, <i>unlikely</i>, <i>certain</i>, <i>impossible</i>, or <i>equally likely</i> to occur. 4-6.7 Analyze possible outcomes for a simple event.</p> <p>Grade 5 Standard 5-6 (Data Analysis and Probability): The student will demonstrate through the mathematical processes an understanding of investigation design, the effect of data-collection methods on a data set, the interpretation and application of the measures of central tendency, and the application of basic concepts of probability.</p> <p>Indicators 5-6.1 Design a mathematical investigation to address a question. 5-6.2 Analyze how data-collection methods affect the nature of the data set. 5-6.5 Represent the probability of a single-stage event in words and fractions. 5-6.6 Conclude why the sum of the probabilities of the outcomes of an experiment must equal 1.</p> <p>Grade 6 Standard 6-6 (Data Analysis and Probability): The student will demonstrate through the mathematical processes an understanding of the relationships within one population or sample.</p> <p>Indicators 6-6.4 Use theoretical probability to determine the sample space and probability for one- and two-stage events such as tree diagrams, models, lists, charts, and pictures. 6-6.5 Apply procedures to calculate the probability of complementary events.</p>	<p>Language Arts Standard 3-2 (Reading): The student will read and comprehend a variety of informational texts in print and nonprint formats.</p> <p>Indicators 3-2.2 Analyze informational texts to draw conclusions and make inferences. 3-2.4 Create responses to informational texts through a variety of methods such as drawings, written works, and oral presentations. 3-2.5 Carry out independent reading for extended periods of time to gain information. 3-2.7 Use graphic features such as illustrations, graphs, charts, maps, diagrams, and graphic organizers as sources of information.</p> <p>Standard 3-4 (Writing): The student will 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 3-4.1 Use prewriting techniques such as creating lists, having discussions, using graphic organizers, and using literary models to organize written works. 3-4.2 Use complete sentences (including compound sentences) in writing. 3-4.6 Use revision strategies to improve word choice and the logical progression of ideas in written works.</p> <p>Science Standard 3-1 (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 3-1.3 Generate questions such as “what if?” or “how?” about objects, organisms, and events in the environment and use those questions to conduct a simple scientific investigation. 3-1.4 Predict the outcome of a simple investigation and compare the result with the prediction. 3-1.7 Explain why similar investigations might produce different results.</p>

Notes:

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

Subconcept: Situations that occur in everyday life can be modeled mathematically.

Lessons 18, 19, 20

Focus Question: What are examples of everyday use of mathematics?

Process Standards	Content Standards	Horizontal Connections
<p>Mathematics Standard 3-1 (Process): The student will understand and utilize the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation. Indicators 3-1.1 Analyze information to solve increasingly more sophisticated problems. 3-1.2 Construct arguments that lead to conclusions about general mathematical properties and relationships. 3-1.3 Explain and justify answers on the basis of mathematical properties, structures, and relationships. 3-1.4 Generate descriptions and mathematical statements about relationships between and among classes of objects. 3-1.5 Use correct, complete, and clearly written and oral mathematical language to pose questions, communicate ideas, and extend problem situations. 3-1.6 Generalize connections between new mathematical ideas and related concepts and subjects that have been previously considered. 3-1.7 Use flexibility in mathematical representations. 3-1.8 Recognize the limitations of various forms of mathematical representations.</p>	<p>Mathematics 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.</p>	<p>Mathematics Standard 3-3 (Algebra): 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. Indicators 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>

Notes:

Vertical Connections	Cross Curricular Connections
<p>Grade 4 Standard 4-6: (Data Analysis and Probability) The student will demonstrate through the mathematical processes an understanding of the impact of data-collection methods, the appropriate graph for categorical or numerical data, and the analysis of possible outcomes for a simple event. Indicators 4-6.1 Compare how data-collection methods impact survey results. 4-6.7 Analyze possible outcomes for a simple event.</p> <p>Grade 5 Standard 5-6 (Data Analysis and Probability): The student will demonstrate through the mathematical processes an understanding of investigation design, the effect of data-collection methods on a data set, the interpretation and application of the measures of central tendency, and the application of basic concepts of probability. Indicators 5-6.1 Design a mathematical investigation to address a question. 5-6.2 Analyze how data-collection methods affect the nature of the data set. 5-6.5 Represent the probability of a single-stage event in words and fractions. 5-6.6 Conclude why the sum of the probabilities of the outcomes of an experiment must equal 1.</p> <p>Grade 6 Standard 6-6 (Data Analysis and Probability): The student will demonstrate through the mathematical processes an understanding of the relationships within one population or sample. Indicators 6-6.4 Use theoretical probability to determine the sample space and probability for one- and two-stage events such as tree diagrams, models, lists, charts, and pictures. 6-6.5 Apply procedures to calculate the probability of complementary events.</p>	<p>Language Arts Standard 3-2 (Reading): The student will read and comprehend a variety of informational texts in print and nonprint formats. Indicators 3-2.2 Analyze informational texts to draw conclusions and make inferences. 3-2.4 Create responses to informational texts through a variety of methods such as drawings, written works, and oral presentations. 3-2.5 Carry out independent reading for extended periods of time to gain information. 3-2.7 Use graphic features such as illustrations, graphs, charts, maps, diagrams, and graphic organizers as sources of information.</p> <p>Standard 3-4 (Writing): The student will 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 3-4.1 Use prewriting techniques such as creating lists, having discussions, using graphic organizers, and using literary models to organize written works. 3-4.2 Use complete sentences (including compound sentences) in writing. 3-4.6 Use revision strategies to improve word choice and the logical progression of ideas in written works.</p> <p>Science Standard 3-1 (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. Indicators 3-1.3 Generate questions such as “what if?” or “how?” about objects, organisms, and events in the environment and use those questions to conduct a simple scientific investigation. 3-1.4 Predict the outcome of a simple investigation and compare the result with the prediction. 3-1.7 Explain why similar investigations might produce different results.</p>

