

Math Out of the Box
Scope and Sequence: Kindergarten
Tennessee Mathematics Standards

Scope and Sequence Overview

First Quarter

Developing Algebraic Thinking: Lessons 1-10

Developing Number Concepts: Module A: Lessons 1-15

Second Quarter

Developing Number Concepts: Module A: Lessons 16-20

Developing Algebraic Thinking (Data Analysis): Lessons 11-20

Developing Measurement Benchmarks: Lessons 1-9

Third Quarter

Developing Measurement Benchmarks: Lessons 10-20

Developing Number Concepts: Module B: Lessons 1-12

Fourth Quarter

Developing Number Concepts: Module B: Lessons 13-20

Developing Geometric Thinking: Lessons 1-20



Developing Algebraic Thinking: Rhythm and Design

Days 1 to 5: Lessons 1-3

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.1 Identify, duplicate, and extend simple number patterns and sequential and growing patterns. GLE 0006.3.2 Recognize attributes (such as color, shape, size) and patterns (such as repeated pairs, bilateral symmetry).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.1 Use a variety of manipulatives (such as connecting cubes, number cards, shapes) to create patterns. 0006.3.2 Name, copy, and extend patterns. 0006.3.3 Translate simple patterns into rules. 0006.3.5 Describe change in attributes according to qualitative criteria such as longer/shorter, colder/warmer, heavier/lighter.</p> <p>Standard 4 – Geometry and Measurement Checks for Understanding (Formative/Summative Assessment): 0006.4.1 Identify, name, and describe a variety of shapes (i.e. circles, squares, triangles, rectangles, hexagons, trapezoids) shown in various positions. 0006.4.3 Sort plane figures into groups, name and describe the attributes of the shapes (such as number of sides and corners (vertices)). 0006.4.5 Use basic shapes and spatial reasoning to model objects and construct more complex shapes.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

Developing Algebraic Thinking: Rhythm and Design

Days 6 to 10: Lessons 4-6

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 2 – Number and Operations Grade Level Expectations: GLE 0006.2.2 Create, represent and recognize a set with a given number of objects.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.2.5 Create a set with a given number of objects.</p> <p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.2 Recognize attributes (such as color, shape, size) and patterns (such as repeated pairs, bilateral symmetry).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.1 Use a variety of manipulatives (such as connecting cubes, number cards, shapes) to create patterns. 0006.3.2 Name, copy, and extend patterns. 0006.3.3 Translate simple patterns into rules. 0006.3.5 Describe change in attributes according to qualitative criteria such as longer/shorter, colder/warmer, heavier/lighter.</p> <p>Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.1 Sort objects and use one or more attributes to solve problems. GLE 0006.5.2 Re-sort objects using new attributes.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.5.1 Sort objects into sets and describe how the objects were sorted.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

	0006.5.2 Sort objects in different ways. 0006.5.3 Collect and count data.	
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Developing Algebraic Thinking: Rhythm and Design

Days 11 to 17: Lessons 7-10

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.2 Begin to develop the concept of estimation using concrete objects.</p>	<p>Standard 2 – Number and Operations Grade Level Expectations: GLE 0006.2.2 Create, represent and recognize a set with a given number of objects.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.2.5 Create a set with a given number of objects.</p> <p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.1 Identify, duplicate, and extend simple number patterns and sequential and growing patterns. GLE 0006.3.2 Recognize attributes (such as color, shape, size) and patterns (such as repeated pairs, bilateral symmetry).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.1 Use a variety of manipulatives (such as connecting cubes, number cards, shapes) to create patterns. 0006.3.2 Name, copy, and extend patterns. 0006.3.3 Translate simple patterns into rules.</p> <p>Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.1 Sort objects and use one or more attributes to solve problems. GLE 0006.5.2 Re-sort objects using new attributes.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.5.1 Sort objects into sets and describe how the objects were sorted.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.	0006.5.2 Sort objects in different ways. 0006.5.3 Collect and count data.	
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Developing Number Concepts, Module A: Like and Unlike

Days 18 to 34: Lessons 1-9

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 2 – Number and Operations Grade Level Expectations: GLE 0006.2.1 Count objects in a set and use numbers, including written numerals to 25. GLE 0006.2.2 Create, represent and recognize a set with a given number of objects. GLE 0006.2.3 Recognize, compare and order sets of numerals by using both cardinal and ordinal meanings.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.2.1 Count objects to 25 using one-to-one correspondence and identify the quantity in the counted group. 0006.2.2 Match quantities to 25 with numerals and written words. 0006.2.3 Count backward from 10 to 1. 0006.2.5 Create a set with a given number of objects. 0006.2.6 Quickly recognize the number of objects in a small set. 0006.2.7 Recognize zero (0) as a set with “no objects”. 0006.2.8 Compare sets of ten or fewer objects and identify which are equal to, more than, or less than others. 0006.2.9 Order the numbers through 25 using numerals and words. 0006.2.17 Understand that numbers can be represented by different groupings.</p> <p>Standard 3 – Algebra</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.4 Sort, order and classify objects by</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

	<p>attribute and identify objects that do not belong in a particular group.</p> <p>Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.1 Sort objects and use one or more attributes to solve problems. GLE 0006.5.2 Re-sort objects using new attributes.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.5.1 Sort objects into sets and describe how the objects were sorted. 0006.5.2 Sort objects in different ways. 0006.5.3 Collect and count data.</p>	
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Developing Number Concepts, Module A: Like and Unlike

Days 35 to 45: Lessons 10-15

Process Standards	Content Standards	Technology Resources
<p>Standard 1 □ Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.1 Model addition and subtraction (e.g., using a number chart, number line and/or</p>	<p>Standard 2 – Number and Operations Grade Level Expectations: GLE 0006.2.1 Count objects in a set and use numbers, including written numerals to 25. GLE 0006.2.3 Recognize, compare and order sets of numerals by using both cardinal and ordinal meanings. GLE 0006.2.4 Understand addition as “putting together” and subtraction as “breaking apart.” GLE 0006.2.5 Model the numbers 1 through 10 as sums or differences of different sets of whole numbers (composing and decomposing numbers).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.2.1 Count objects to 25 using one-to-one correspondence and identify the quantity in the counted group. 0006.2.2 Match quantities to 25 with numerals and written words. 0006.2.3 Count backward from 10 to 1. 0006.2.5 Create a set with a given number of objects. 0006.2.6 Quickly recognize the number of objects in a small set. 0006.2.9 Order the numbers through 25 using numerals and words. 0006.2.10 Recognize 6 through 10 as “five and some ones.” 0006.2.12 Model simple joining and separating situations with objects. 0006.2.13 Add and subtract single-digit numbers whose total or difference is between 0 and 10. 0006.2.14 Understand add as “put together” or “count on” and solve addition problems with sums less than 20. 0006.2.16 Model, demonstrate, and solve story</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a1l.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

concrete objects). 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.	problems that illustrate addition and subtraction. 0006.2.17 Understand that numbers can be represented by different groupings.	
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Developing Number Concepts, Module A: Like and Unlike

Days 1 to 12: Lessons 16-20

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.1 Model addition and subtraction (e.g., using a number chart, number line and/or concrete</p>	<p>Standard 2 – Number and Operations Grade Level Expectations: GLE 0006.2.1 Count objects in a set and use numbers, including written numerals to 25. GLE 0006.2.3 Recognize, compare and order sets of numerals by using both cardinal and ordinal meanings. GLE 0006.2.4 Understand addition as “putting together” and subtraction as “breaking apart.”</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.2.1 Count objects to 25 using one-to-one correspondence and identify the quantity in the counted group. 0006.2.2 Match quantities to 25 with numerals and written words. 0006.2.3 Count backward from 10 to 1. 0006.2.6 Quickly recognize the number of objects in a small set. 0006.2.9 Order the numbers through 25 using numerals and words. 0006.2.12 Model simple joining and separating situations with objects. 0006.2.13 Add and subtract single-digit numbers whose total or difference is between 0 and 10. 0006.2.14 Understand add as “put together” or “count on” and solve addition problems with sums less than 20. 0006.2.15 Understand subtraction as “break apart” or “take away” and solve subtraction problems using numbers 1 through 10. 0006.2.16 Model, demonstrate, and solve story problems that illustrate addition and subtraction. 0006.2.17 Understand that numbers can be represented by different groupings.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

<p>objects). 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 3 – Algebra Checks for Understanding (Formative/Summative Assessment): 0006.3.2 Name, copy, and extend patterns.</p>	
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Developing Algebraic Thinking: Rhythm and Design

Days 13 to 18: Lessons 11-13

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 2 – Number and Operations Grade Level Expectations: GLE 0006.2.1 Count objects in a set and use numbers, including written numerals to 25. GLE 0006.2.2 Create, represent and recognize a set with a given number of objects.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.2.5 Create a set with a given number of objects.</p> <p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.2 Recognize attributes (such as color, shape, size) and patterns (such as repeated pairs, bilateral symmetry).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.4 Sort, order and classify objects by attribute and identify objects that do not belong in a particular group.</p> <p>Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.2 Re-sort objects using new attributes.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.5.1 Sort objects into sets and describe how the objects were sorted. 0006.5.2 Sort objects in different ways.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

Developing Algebraic Thinking: Rhythm and Design

Days 19 to 24: Lessons 14-16

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 2 – Number and Operations Grade Level Expectations: GLE 0006.2.1 Count objects in a set and use numbers, including written numerals to 25.</p> <p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.2 Recognize attributes (such as color, shape, size) and patterns (such as repeated pairs, bilateral symmetry).</p> <p>Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.1 Sort objects and use one or more attributes to solve problems. GLE 0006.5.2 Re-sort objects using new attributes.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.5.1 Sort objects into sets and describe how the objects were sorted. 0006.5.2 Sort objects in different ways. 0006.5.3 Collect and count data.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a1l.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

Developing Algebraic Thinking: Rhythm and Design

Days 25 to 31: Lessons 17-20

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and</p>	<p>Standard 2 – Number and Operations Grade Level Expectations: GLE 0006.2.1 Count objects in a set and use numbers, including written numerals to 25.</p> <p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.2 Recognize attributes (such as color, shape, size) and patterns (such as repeated pairs, bilateral symmetry).</p> <p>Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.1 Sort objects and use one or more attributes to solve problems. GLE 0006.5.2 Re-sort objects using new attributes.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.5.2 Sort objects in different ways. 0006.5.3 Collect and count data.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

videos to convey ideas of mathematics.		
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Developing Measurement Benchmarks: Over and Under Days 32 to 45: Lessons 1-9

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.3 Describe qualitative change.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.4 Sort, order and classify objects by attribute and identify objects that do not belong in a particular group. 0006.3.5 Describe change in attributes according to qualitative criteria such as longer/shorter, colder/warmer, heavier/lighter.</p> <p>Standard 4 – Geometry and Measurement Grade Level Expectations: GLE 0006.4.3 Compare and order measurable attributes of objects directly (by comparing them with each other) and indirectly (by comparing both with a third object).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.4.7 Make direct and indirect comparisons between objects (such as recognize which is shorter, longer, taller, lighter, heavier, or holds more).</p> <p>Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.1 Sort objects and use one or more attributes to solve problems. GLE 0006.5.2 Re-sort objects using new attributes.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.5.1 Sort objects into sets and describe how the objects were sorted.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

	0006.5.2 Sort objects in different ways. 0006.5.3 Collect and count data.	
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Developing Measurement Benchmarks: Over and Under Days 1 to 10: Lessons 10-16

Process Standards	Content Standards	Technology Resources
<p>Standard 1 □ Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and</p>	<p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.3 Describe qualitative change.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.5 Describe change in attributes according to qualitative criteria such as longer/shorter, colder/warmer, heavier/lighter.</p> <p>Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.1 Sort objects and use one or more attributes to solve problems. GLE 0006.5.2 Re-sort objects using new attributes.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.5.1 Sort objects into sets and describe how the objects were sorted. 0006.5.2 Sort objects in different ways. 0006.5.3 Collect and count data.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

videos to convey ideas of mathematics.		
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Developing Measurement Benchmarks: Over and Under

Days 11 to 20: Lessons 17-20

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.2 Begin to develop the concept of estimation using concrete objects.</p>	<p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.3 Describe qualitative change.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.5 Describe change in attributes according to qualitative criteria such as longer/shorter, colder/warmer, heavier/lighter.</p> <p>Standard 4 – Geometry and Measurement Grade Level Expectations: GLE 0006.4.3 Compare and order measurable attributes of objects directly (by comparing them with each other) and indirectly (by comparing both with a third object).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.4.7 Make direct and indirect comparisons between objects (such as recognize which is shorter, longer, taller, lighter, heavier, or holds more).</p> <p>Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.1 Sort objects and use one or more attributes to solve problems. GLE 0006.5.2 Re-sort objects using new attributes.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.5.1 Sort objects into sets and describe how the objects were sorted. 0006.5.2 Sort objects in different ways. 0006.5.3 Collect and count data.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.		
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Developing Number Concepts, Module B: Like and Unlike

Days 21 to 35: Lessons 1-8

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.2 Begin to develop the concept of estimation using concrete objects.</p>	<p>Standard 2 – Number and Operations Grade Level Expectations: GLE 0006.2.1 Count objects in a set and use numbers, including written numerals to 25. GLE 0006.2.3 Recognize, compare and order sets of numerals by using both cardinal and ordinal meanings.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.2.1 Count objects to 25 using one-to-one correspondence and identify the quantity in the counted group. 0006.2.2 Match quantities to 25 with numerals and written words. 0006.2.4 Count to 20 by twos. 0006.2.9 Order the numbers through 25 using numerals and words. 0006.2.11 Recognize and use ordinal numbers (e.g., first, fourth, last).</p> <p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.1 Identify, duplicate, and extend simple number patterns and sequential and growing patterns.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.1 Use a variety of manipulatives (such as connecting cubes, number cards, shapes) to create patterns. 0006.3.3 Translate simple patterns into rules.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.		
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Developing Number Concepts, Module B: Like and Unlike

Days 36 to 45: Lessons 9-12

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 2 – Number and Operations Grade Level Expectations: GLE 0006.2.1 Count objects in a set and use numbers, including written numerals to 25. GLE 0006.2.3 Recognize, compare and order sets of numerals by using both cardinal and ordinal meanings.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.2.1 Count objects to 25 using one-to-one correspondence and identify the quantity in the counted group. 0006.2.2 Match quantities to 25 with numerals and written words. 0006.2.5 Create a set with a given number of objects. 0006.2.9 Order the numbers through 25 using numerals and words.</p> <p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.1 Identify, duplicate, and extend simple number patterns and sequential and growing patterns.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.1 Use a variety of manipulatives (such as connecting cubes, number cards, shapes) to create patterns.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

Developing Number Concepts, Module B: Like and Unlike

Days 1 to 5: Lessons 13-15

Process Standards	Content Standards	Technology Resources
<p>Standard 1 □ Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.1 Model addition and subtraction (e.g., using a number chart, number line and/or concrete</p>	<p>Standard 2 – Number and Operations Grade Level Expectations: GLE 0006.2.1 Count objects in a set and use numbers, including written numerals to 25. GLE 0006.2.3 Recognize, compare and order sets of numerals by using both cardinal and ordinal meanings. GLE 0006.2.4 Understand addition as “putting together” and subtraction as “breaking apart.”</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.2.1 Count objects to 25 using one-to-one correspondence and identify the quantity in the counted group. 0006.2.2 Match quantities to 25 with numerals and written words. 0006.2.12 Model simple joining and separating situations with objects. 0006.2.13 Add and subtract single-digit numbers whose total or difference is between 0 and 10. 0006.2.14 Understand add as “put together” or “count on” and solve addition problems with sums less than 20. 0006.2.15 Understand subtraction as “break apart” or “take away” and solve subtraction problems using numbers 1 through 10.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

objects). 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.		
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Developing Number Concepts, Module B: Like and Unlike

Days 6 to 12: Lessons 16-20

Process Standards	Content Standards	Technology Resources
<p>Standard 1 □ Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 2 – Number and Operations Grade Level Expectations: GLE 0006.2.1 Count objects in a set and use numbers, including written numerals to 25.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.2.1 Count objects to 25 using one-to-one correspondence and identify the quantity in the counted group. GLE 0006.2.4 Understand addition as “putting together” and subtraction as “breaking apart.”</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.2.1 Count objects to 25 using one-to-one correspondence and identify the quantity in the counted group. 0006.2.2 Match quantities to 25 with numerals and written words. 0006.2.12 Model simple joining and separating situations with objects. 0006.2.13 Add and subtract single-digit numbers whose total or difference is between 0 and 10. 0006.2.14 Understand add as “put together” or “count on” and solve addition problems with sums less than 20. 0006.2.15 Understand subtraction as “break apart” or “take away” and solve subtraction problems using numbers 1 through 10.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

Developing Geometric Logic: Towers and Trails

Days 13 to 23: Lessons 1-6

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.2 Recognize attributes (such as color, shape, size) and patterns (such as repeated pairs, bilateral symmetry).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.4 Sort, order and classify objects by attribute and identify objects that do not belong in a particular group.</p> <p>Standard 4 – Geometry and Measurement Grade Level Expectations: GLE 0006.4.1 Interpret and describe the physical world with geometric ideas and vocabulary. GLE 0006.4.3 Compare and order measurable attributes of objects directly (by comparing them with each other) and indirectly (by comparing both with a third object).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.4.2 Identify, name, and describe three-dimensional shapes (such as sphere, cube, cone, cylinder). 0006.4.3 Sort plane figures into groups, name and describe the attributes of the shapes (such as number of sides and corners (vertices)). 0006.4.4 Sort solid figures into groups, name and describe the attributes of the shapes. 0006.4.5 Use basic shapes and spatial reasoning to model objects and construct more complex shapes. 0006.4.7 Make direct and indirect comparisons between objects (such as recognize which is shorter, longer, taller, lighter, heavier, or holds</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a1l.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

	<p>more).</p> <p>Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.1 Sort objects and use one or more attributes to solve problems. GLE 0006.5.2 Re-sort objects using new attributes.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.5.1 Sort objects into sets and describe how the objects were sorted. 0006.5.2 Sort objects in different ways.</p>	
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Developing Geometric Logic: Towers and Trails

Days 24 to 32: Lessons 7-12

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.2 Recognize attributes (such as color, shape, size) and patterns (such as repeated pairs, bilateral symmetry).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.4 Sort, order and classify objects by attribute and identify objects that do not belong in a particular group.</p> <p>Standard 4 – Geometry and Measurement Grade Level Expectations: GLE 0006.4.1 Interpret and describe the physical world with geometric ideas and vocabulary. GLE 0006.4.3 Compare and order measurable attributes of objects directly (by comparing them with each other) and indirectly (by comparing both with a third object).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.4.1 Identify, name, and describe a variety of shapes (i.e. circles, squares, triangles, rectangles, hexagons, trapezoids) shown in various positions. 0006.4.3 Sort plane figures into groups, name and describe the attributes of the shapes (such as number of sides and corners (vertices)). 0006.4.7 Make direct and indirect comparisons between objects (such as recognize which is shorter, longer, taller, lighter, heavier, or holds more).</p> <p>Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.1 Sort objects and use one or more</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

	attributes to solve problems. GLE 0006.5.2 Re-sort objects using new attributes.	
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Developing Geometric Logic: Towers and Trails

Days 33 to 38: Lessons 13-16

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.2 Recognize attributes (such as color, shape, size) and patterns (such as repeated pairs, bilateral symmetry).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.4 Sort, order and classify objects by attribute and identify objects that do not belong in a particular group.</p> <p>Standard 4 – Geometry and Measurement Grade Level Expectations: GLE 0006.4.1 Interpret and describe the physical world with geometric ideas and vocabulary. GLE 0006.4.3 Compare and order measurable attributes of objects directly (by comparing them with each other) and indirectly (by comparing both with a third object).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.4.1 Identify, name, and describe a variety of shapes (i.e. circles, squares, triangles, rectangles, hexagons, trapezoids) shown in various positions. 0006.4.2 Identify, name, and describe three-dimensional shapes (such as sphere, cube, cone, cylinder). 0006.4.3 Sort plane figures into groups, name and describe the attributes of the shapes (such as number of sides and corners (vertices)). 0006.4.4 Sort solid figures into groups, name and describe the attributes of the shapes. 0006.4.7 Make direct and indirect comparisons between objects (such as recognize which is shorter, longer, taller, lighter, heavier, or holds</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

	more). Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.1 Sort objects and use one or more attributes to solve problems. GLE 0006.5.2 Re-sort objects using new attributes.	
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Developing Geometric Logic: Towers and Trails

Days 39 to 45: Lessons 17-20

Process Standards	Content Standards	Technology Resources
<p>Standard 1 – Mathematical Processes Grade Level Expectations: GLE 0406.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning. GLE 0406.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution. GLE 0406.1.3 Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas. GLE 0406.1.4 Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies. GLE 0406.1.5 Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions. GLE 0406.1.6 Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely. GLE 0406.1.7 Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world. GLE 0406.1.8 Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.1.9 Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p>	<p>Standard 3 – Algebra Grade Level Expectations: GLE 0006.3.2 Recognize attributes (such as color, shape, size) and patterns (such as repeated pairs, bilateral symmetry).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.3.4 Sort, order and classify objects by attribute and identify objects that do not belong in a particular group.</p> <p>Standard 4 – Geometry and Measurement Grade Level Expectations: GLE 0006.4.1 Interpret and describe the physical world with geometric ideas and vocabulary. GLE 0006.4.2 Use positional terms to specify locations with simple relationships. GLE 0006.4.3 Compare and order measurable attributes of objects directly (by comparing them with each other) and indirectly (by comparing both with a third object).</p> <p>Checks for Understanding (Formative/Summative Assessment): 0006.4.6 Identify positions (such as beside, inside, outside, above, below, between, on, over, under, near, far, forward, backward, top, middle, bottom, left, right) using models, illustrations, and stories.</p> <p>Standard 5 – Data, Probability and Statistics Grade Level Expectations: GLE 0006.5.1 Sort objects and use one or more attributes to solve problems. GLE 0006.5.2 Re-sort objects using new attributes.</p>	<p>Carolina Curriculum http://www.carolinacurriculum.com</p> <p>Math Out of the Box www.mathoutofthebox.org</p> <p>WASL Math Notebooking http://www.pasd.wednet.edu/school/mathWASL/2a11.htm</p> <p>I Teach Inquiry Network http://iteachinquiryblog.com/</p> <p>NCTM Resources for Teaching Math http://illuminations.nctm.org</p> <p>Promethean Planet http://www.prometheanplanet.com/en-us/</p> <p>SMART Board http://exchange.smarttech.com/</p> <p>Interactivate Activities http://www.shodor.org/interactivate/activities/</p> <p>National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html</p>

