



# Our Savior Christian Academy

## *Curriculum Framework for:*     **Math**

*Our Savior Christian Academy's "Curriculum Framework for Math" is designed as a tool that will follow the same format for all grades K-4. Each grade level will have a separate section based on classroom structure, and it will be up to each individual teacher to design a lesson plan that fits their classroom needs based on these standards and suggestions.*

*Our Savior Christian Academy's "Curriculum Framework for Math" is offered to the glory of God that it may be a blessing among Lutheran school educators and their students.*

## ✠ PHILOSOPHY ✠

*God has created an orderly, systematic universe. Mathematics is a useful and unique God-given universal language that facilitates the ability to appreciate the created order God has given us and further advances the understanding of our modern, high-tech world. The development of mathematics abilities prepares students for lives of responsible Christian service to His church and the community.*

# Our Savior Christian Academy

## Broad Goals

### *From a Christ-Centered Perspective, Teachers will:*

- Incorporate Jesus Christ in all core areas of mathematics.
- Provide the children with a wide range of knowledge, skills, & related activities that help him/her to develop an understanding of the physical world & social exchanges.
- Give the child a language and a system through which he/she may analyze, describe and explain a wide range of experiences, make predictions, & solve problems.
- Foster creative and aesthetic development that enhances the growth of reasoning.
- Encourage the children to be confident and to communicate effectively through mathematics.

### *This will be obtained by:*

- Keeping Our Savior, Jesus Christ, as the center focus on our campus and in our curriculum.
- Fascinating and significant mathematical experiences through multi-sensory activities
- Applying mathematics to other core areas of learning
- Adapting other subjects to add valuable perspectives to the mathematics curriculum.
- Stair stepping on an individual basis with the knowledge that children acquire an understanding of mathematical ideas in an uneven way.
- Continuous assessment for analysis and planning in mathematics.
  - Focuses on the identification of the children's existing knowledge, misconceptions, and strategies.
  - Updating curriculum to meet changing state standards along with student needs
  - Provides information that will enable the teacher to cater for individual differences in ability, previous learning and learning style, and to resist pressure to push the child to premature mechanical mastery.
- Work samples and results that are shared with the parents, congregants, and community.

**Kindergarden Common Core**

**First Grade Common Core**

# Number and Operations

K/1

**1. Understand numbers, ways of representing numbers, relationships among numbers and number systems – integrate faith using the Bible to understand Biblical numbers and their significance.**

	Kindergarten	Grade 1
Read, write and compare numbers	<p><b>A</b> *rote count to 100 and recognize numbers up to 31 <b>N1AK</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <p>1. 100 days of school (weekly 100 activity &amp; bringing 100 from home) 2. Create a number portfolio</p> <p><b>K.CC.1</b> Count to 100 by ones and by tens.  <a href="http://illustrativemathematics.org/illustrations/359">http://illustrativemathematics.org/illustrations/359</a>  <a href="http://illustrativemathematics.org/illustrations/360">http://illustrativemathematics.org/illustrations/360</a>  <a href="http://illustrativemathematics.org/illustrations/402">http://illustrativemathematics.org/illustrations/402</a>  <a href="http://illustrativemathematics.org/illustrations/403">http://illustrativemathematics.org/illustrations/403</a>  <a href="http://illustrativemathematics.org/illustrations/448">http://illustrativemathematics.org/illustrations/448</a>  <a href="http://illustrativemathematics.org/illustrations/450">http://illustrativemathematics.org/illustrations/450</a>  <a href="http://illustrativemathematics.org/illustrations/451">http://illustrativemathematics.org/illustrations/451</a>  <a href="http://illustrativemathematics.org/illustrations/454">http://illustrativemathematics.org/illustrations/454</a></p>	<p>*read, write, and compare whole numbers less than 100 <b>N1A1</b> <b>N1A1</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <p>1. 100 days of school (weekly 100 activity &amp; bringing 100 from home) 2. Create a number portfolio</p> <p><b>K.CC.3</b> Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).  <a href="http://illustrativemathematics.org/illustrations/398">http://illustrativemathematics.org/illustrations/398</a>  <a href="http://illustrativemathematics.org/illustrations/399">http://illustrativemathematics.org/illustrations/399</a>  <a href="http://illustrativemathematics.org/illustrations/400">http://illustrativemathematics.org/illustrations/400</a>  <a href="http://illustrativemathematics.org/illustrations/402">http://illustrativemathematics.org/illustrations/402</a>  <a href="http://illustrativemathematics.org/illustrations/403">http://illustrativemathematics.org/illustrations/403</a>  <a href="http://illustrativemathematics.org/illustrations/450">http://illustrativemathematics.org/illustrations/450</a>  <a href="http://illustrativemathematics.org/illustrations/451">http://illustrativemathematics.org/illustrations/451</a>  <a href="http://illustrativemathematics.org/illustrations/452">http://illustrativemathematics.org/illustrations/452</a>  <a href="http://illustrativemathematics.org/illustrations/454">http://illustrativemathematics.org/illustrations/454</a></p> <p><b>K.CC.6</b> Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. (Include groups with up to ten objects.)  <a href="http://illustrativemathematics.org/illustrations/453">http://illustrativemathematics.org/illustrations/453</a></p> <p><b>K.CC.7</b> Compare two numbers between 1 and 10 presented as written numerals.  <a href="http://illustrativemathematics.org/illustrations/453">http://illustrativemathematics.org/illustrations/453</a></p> <p><b>1.NBT.1</b> Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.  <a href="http://illustrativemathematics.org/illustrations/405">http://illustrativemathematics.org/illustrations/405</a></p> <p><b>1.NBT.1</b> Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols &gt;, =, and &lt;.  <a href="http://illustrativemathematics.org/illustrations/6">http://illustrativemathematics.org/illustrations/6</a></p>
	<p>DOK 1</p> <p>ST MA 5 1.10</p>	<p>DOK 1</p> <p>MA 5 1.10</p>

# Number and Operations

K/1

<b>B</b> Represent and use rational numbers	<p>*recognize <math>\frac{1}{2}</math> of a shape</p> <p style="text-align: center;"><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>Center-Concentration Fraction: cards with <math>\frac{1}{2}</math>. <math>\frac{1}{4}</math>. <math>\frac{1}{3}</math>, along with parts of circle cut into like pieces. Cards will face down and students will take turn matching circle pieces to corresponding cards</li> <li>Center-Fraction Go Fish-matching fraction cards to fraction pieces</li> <li>Activity-Pizza-cutting large circles and pizza pieces out of construction paper</li> </ol>	<p>*recognize <math>\frac{1}{2}</math> and <math>\frac{1}{4}</math> of a shape <b>NIB1</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>Center-Concentration Fraction: cards with <math>\frac{1}{2}</math>. <math>\frac{1}{4}</math>. <math>\frac{1}{3}</math>, along with parts of circle cut into like pieces. Cards will face down and students will take turn matching circle pieces to corresponding cards</li> <li>Center-Fraction Go Fish-matching fraction cards to fraction pieces</li> <li>Activity-Pizza-cutting large circles and pizza pieces out of construction paper  <b>1.G.3</b> Partition circles and rectangles into two and four equal shares, describe the shares using the words <i>halves</i>, <i>fourths</i>, and <i>quarters</i>, and use the phrases <i>half of</i>, <i>fourth of</i>, and <i>quarter of</i>. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.</li> </ol>
	DOK 1 ST MA 5 1.10	DOK 1 ST MA 5
<b>C</b> Compose and decompose numbers	<p>*use <u>concrete objects</u> to <u>compose and decompose</u> values up to 10 <b>NICK</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>Create ten numbers by rolling the dice and using that information to form the number. Express them by place value and draw illustrations to support them.</li> <li>Circle time using number line students created and their pictures with clothespins</li> <li>Using manipulative in addition games to compute answers  <b>K.OA.3</b> Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., <math>5 = 2 + 3</math> and <math>5 = 4 + 1</math>).  <a href="http://illustrativemathematics.org/illustrations/165">http://illustrativemathematics.org/illustrations/165</a>  <a href="http://illustrativemathematics.org/illustrations/166">http://illustrativemathematics.org/illustrations/166</a>  <a href="http://illustrativemathematics.org/illustrations/175">http://illustrativemathematics.org/illustrations/175</a>  <a href="http://illustrativemathematics.org/illustrations/176">http://illustrativemathematics.org/illustrations/176</a>  <a href="http://illustrativemathematics.org/illustrations/177">http://illustrativemathematics.org/illustrations/177</a>  <b>K.OA.1</b> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. (Drawings need not show details, but should show the mathematics in the problem.)</li> </ol>	<p>*<u>compose or decompose</u> whole numbers up to 20 using multiple strategies such as known facts, doubles and <u>close to doubles</u>, tens, and one place value <b>NICI</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>Create ten numbers by rolling the dice and using that information to form the number. Express them by place value and draw illustrations to support them.</li> <li>Circle time using number line students created and their pictures with clothespins</li> <li>Flip book with ones, tens, hundreds  <a href="http://www.education.com/activity/article/Flip_Book_fourth/">http://www.education.com/activity/article/Flip_Book_fourth/</a>), Roll dice and add using manipulative.  <b>1.OA.4</b> Understand subtraction as an unknown-addend problem. For example, subtract <math>10 - 8</math> by finding the number that makes 10 when added to 8.  <b>1.OA.5</b> Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).  <b>1.OA.6</b> Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., <math>8 + 6 = 8 + 2 + 4 = 10 + 4 = 14</math>); decomposing a number leading to a ten (e.g., <math>13 - 4 = 13 - 3 - 1 = 10 - 1 = 9</math>); using the relationship between addition and subtraction (e.g., knowing the <math>8 + 4 = 12</math>, one knows <math>12 - 8 = 4</math>); and creating equivalent but easier or known sums (e.g., adding <math>6 + 7</math> by creating the known equivalent <math>6 + 6 + 1 = 12 + 1 = 13</math>).  <b>1.OA.8</b> Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations <math>8 + ? = 11</math>, <math>5 = \square - 3</math>, <math>6 + 6 = \square</math>. <a href="http://illustrativemathematics.org/illustrations/4">http://illustrativemathematics.org/illustrations/4</a>  <b>1.NBT.2.b</b> The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.  <b>1.NBT.2.a</b> 10 can be thought of as a bundle of ten ones -- called a "ten".</li> </ol>
	DOK 2 ST MA 1 1.6	DOK 2 ST MA 1 1.6

# Number and Operations

K/1

1. Understand numbers, ways of representing numbers, relationships among numbers and number systems – continued		
	Kindergarten	Grade 1
D		*skip count by 2s, 5s and 10s <b>N1D1</b>
		<p style="text-align: center;"><b>Curriculum</b></p> <p>1. Circle time jobs: Counting by 2’s, 5’s, and 10’s by clapping, jump roping, jumping jacks, running in place, etc.</p> <p><b>K.CC.1</b> Count to 100 by ones and by tens.  <a href="http://illustrativemathematics.org/illustrations/359">http://illustrativemathematics.org/illustrations/359</a>  <a href="http://illustrativemathematics.org/illustrations/360">http://illustrativemathematics.org/illustrations/360</a>  <a href="http://illustrativemathematics.org/illustrations/402">http://illustrativemathematics.org/illustrations/402</a>  <a href="http://illustrativemathematics.org/illustrations/403">http://illustrativemathematics.org/illustrations/403</a>  <a href="http://illustrativemathematics.org/illustrations/448">http://illustrativemathematics.org/illustrations/448</a>  <a href="http://illustrativemathematics.org/illustrations/450">http://illustrativemathematics.org/illustrations/450</a>  <a href="http://illustrativemathematics.org/illustrations/451">http://illustrativemathematics.org/illustrations/451</a>  <a href="http://illustrativemathematics.org/illustrations/454">http://illustrativemathematics.org/illustrations/454</a></p>
DOK		1
ST		<b>MA 5 1.6</b>

<b>K.CC.2</b>	Count forward beginning from a given number within the known sequence (instead of having to begin at 1). <a href="http://illustrativemathematics.org/illustrations/401">http://illustrativemathematics.org/illustrations/401</a> <a href="http://illustrativemathematics.org/illustrations/361">http://illustrativemathematics.org/illustrations/361</a> <a href="http://illustrativemathematics.org/illustrations/373">http://illustrativemathematics.org/illustrations/373</a> <a href="http://illustrativemathematics.org/illustrations/402">http://illustrativemathematics.org/illustrations/402</a> <a href="http://illustrativemathematics.org/illustrations/403">http://illustrativemathematics.org/illustrations/403</a> <a href="http://illustrativemathematics.org/illustrations/448">http://illustrativemathematics.org/illustrations/448</a> <a href="http://illustrativemathematics.org/illustrations/449">http://illustrativemathematics.org/illustrations/449</a> <a href="http://illustrativemathematics.org/illustrations/450">http://illustrativemathematics.org/illustrations/450</a> <a href="http://illustrativemathematics.org/illustrations/451">http://illustrativemathematics.org/illustrations/451</a> <a href="http://illustrativemathematics.org/illustrations/454">http://illustrativemathematics.org/illustrations/454</a>
<b>K.OA.1</b>	Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. (Drawings need not show details, but should show the mathematics in the problem.)

# Number and Operations

K/1

**2. Understand meanings of operations and how they relate to one another – integrate faith by presenting math from a Biblical view including Old Testament and New Testament stories to support operational meanings.**

Kindergarten

Grade 1

**A**

Represent operations

\*represent/model a given situation involving addition and subtraction of whole numbers using pictures, objects, or symbols **N2A1 NIC1 N2A1 Curriculum**

1. Centers-ice cream game, subtraction bowling, drawing numbers from hat and writing problems on projector, pinto beans; Circle time using number line students created and their pictures with clothespins; Using manipulative and dice to work problems; Noah’s Ark loaded 2 by 2; Unity = 1, Resurrection = 3, Completeness = 7, Fruit of the Sprit = 9, Testimony and Law = 10 etc.

**K.OA.3** Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g.,  $5 = 2 + 3$  and  $5 = 4 + 1$ ).  
<http://illustrativemathematics.org/illustrations/165> <http://illustrativemathematics.org/illustrations/166>  
<http://illustrativemathematics.org/illustrations/175> <http://illustrativemathematics.org/illustrations/176>  
<http://illustrativemathematics.org/illustrations/177>

**K.OA.1** Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. (Drawings need not show details, but should show the mathematics in the problem.)

**K.OA.2** Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. <http://illustrativemathematics.org/illustrations/70>

**1.OA.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (See CCSS Glossary p. 88, Table 1.)  
<http://illustrativemathematics.org/illustrations/2> <http://illustrativemathematics.org/illustrations/160>  
<http://illustrativemathematics.org/illustrations/161> <http://illustrativemathematics.org/illustrations/162>

**1.NBT.4** Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. <http://illustrativemathematics.org/illustrations/163>  
<http://illustrativemathematics.org/illustrations/194> <http://illustrativemathematics.org/illustrations/195>  
<http://illustrativemathematics.org/illustrations/196> <http://illustrativemathematics.org/illustrations/197>

# Number and Operations

K/1

3. Compute fluently and make reasonable estimates – integrate faith by presenting math from a Biblical view including Old Testament and New Testament stories to support operational meanings.	
	Kindergarten
A	
ese nt men	
DOK	
ST	
B	
Develop and demonstrate fluency	
DOK	
ST	
C	
ese nt men	
DOK	
ST	

**Grade 1**

**\*describe or represent the mental strategy used to compute addition and subtraction problems N3A1 Curriculum** Flashcards, Rote worksheets, [www.enchantedlearning.com](http://www.enchantedlearning.com)  
**1.NBT.5** Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

2

MA 1 3.2

**\*use strategies to develop fluency with basic number relationships of addition and subtraction for sums up to 20 N3B1 Curriculum**

1. Practice addition and subtraction problems in every day math. Use math strategies to determine answers. Read number stories and allow students to use manipulative to solve problems. **1.OA.6** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing the  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating the known equivalent  $6 + 6 + 1 = 12 + 1 = 13$ ).

1

MA.1 1.6

**\*apply and describe the strategy used to solve addition or subtraction problems N3C1 Curriculum** Practice addition & subtraction problems in every day math. Use math strategies to determine answers., Read number stories & allow students to use manipulative to solve problems. **1.OA.6** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing the  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating the known equivalent  $6 + 6 + 1 = 12 + 1 = 13$ ).  
**1.NBT.6** Subtract multiples of 10 in the range 10 - 90 from multiples of 10 in the range 10 - 90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. **N2B3** *\*describe the effects of adding and subtracting whole numbers as well as the relationship between the two operations* **1.NBT.4** Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

2

MA 1 3.2

# Number and Operations

K/1

1.OA.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <i>For example, which of the following equations are true and which are false? <math>6 = 6</math>, <math>7 = 8 - 1</math>, <math>5 + 2 = 2 + 5</math>, <math>4 + 1 = 5 + 2</math>.</i> <a href="http://illustrativemathematics.org/illustrations/466">http://illustrativemathematics.org/illustrations/466</a>
1.NBT.2	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
1.NBT.2.c	The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

# Algebraic Relationships

**K/1**

<b>1. Understand patterns, relations and functions – integrate faith using the Bible to reveal process, mirror, and comparative patterns.</b>		
	Kindergarten	Grade 1
<b>A</b>	<p><b>*recognize or repeat sequences of sounds or shapes</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>1. Pattern Blocks</li> <li>2. Pattern activities through each day                             <ol style="list-style-type: none"> <li>1. clap patterns - fast, fast, slow, fast, fast, slow</li> <li>2. actions - hop, hop, clap, clap, hop, hop, clap, clap</li> <li>3. drama activities - swirl arms windy, sunshine; windy, windy, sunshine</li> <li>4. line up at the door in patterns - boy, girl, boy, girl</li> <li>5. Color patterns with materials - red crayon, blue crayon, red crayon, blue crayon</li> <li>6. diagrams - e.g. draw big apple, big apple, small apple; repeat</li> <li>7. Letters and words - AA BB, AA BB or cat, cat, dog; cat, cat, dog</li> </ol> </li> </ol>	<p><b>*extend patterns of sound, shape, motion or a simple numeric pattern</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>3. Pattern Blocks</li> <li>4. Pattern activities through each day                             <ol style="list-style-type: none"> <li>1. clap patterns - fast, fast, slow, fast, fast, slow</li> <li>2. actions - hop, hop, clap, clap, hop, hop, clap, clap</li> <li>3. drama activities - swirl arms windy, sunshine; windy, windy, sunshine</li> <li>4. line up at the door in patterns - boy, girl, boy, girl</li> <li>5. Color patterns with materials - red crayon, blue crayon, red crayon, blue crayon</li> <li>6. diagrams - e.g. draw big apple, big apple, small apple; repeat</li> <li>7. Letters and words - AA BB, AA BB or cat, cat, dog; cat, cat, dog</li> <li>8. <b>Process patterns from the Bible for ex: move away to sinful living to turning back to restoration.</b></li> </ol> </li> </ol>
<b>Recognize and extend patterns</b>		
<b>DOK</b>	2	2
<b>ST</b>	MA 4 1.6	MA 4 1.6
<b>B</b>	<p><b>*create and continue patterns</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>1. Develop a pattern sheet for students to follow with strips of paper (AB, ABB, AABB, AAAB). Once student gets to last box, have them switch so partner can complete pattern.</li> <li>2. Mirror patterns from the Bible – attack follows anointing</li> </ol>	<p><b>*describe how simple <u>repeating patterns</u> are generated</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>1. Describe how simple repeating patterns are generated                             <ol style="list-style-type: none"> <li>a. Pattern blocks</li> <li>b. Pattern puzzles</li> <li>c. Create patterns through paint, objects, and attributes</li> <li>d. Comparative patterns from the Bible including Genesis to Revelation</li> </ol> </li> </ol>
<b>Create and analyze patterns</b>		
<b>DOK</b>	2	2
<b>ST</b>	MA 4 1.6	MA 4 1.6

# Algebraic Relationships

K/1

**2. Represent and analyze mathematical situations and structures using algebraic symbols – integrate faith by using parable symbolism from the Bible.**

	Kindergarten	Grade 1
<b>A</b>		<p><b>*using addition or subtraction, represent a mathematical situation as an <u>expression</u> or number sentence <b>A2A1</b></b></p> <p style="text-align: center;"><b>Curriculum</b></p> <p>1. Problem solving through classroom word stories (represent correct mathematical word sentence)</p> <p><b>2. solve x for y using parable “The Two Builders” Matthew 7:24-27</b></p> <p><b>1.OA.1</b> Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (See CCSS Glossary p. 88, Table 1.)</p> <p><a href="http://illustrativemathematics.org/illustrations/2">http://illustrativemathematics.org/illustrations/2</a>  <a href="http://illustrativemathematics.org/illustrations/160">http://illustrativemathematics.org/illustrations/160</a>  <a href="http://illustrativemathematics.org/illustrations/161">http://illustrativemathematics.org/illustrations/161</a>  <a href="http://illustrativemathematics.org/illustrations/162">http://illustrativemathematics.org/illustrations/162</a>  <a href="http://illustrativemathematics.org/illustrations/163">http://illustrativemathematics.org/illustrations/163</a>  <a href="http://illustrativemathematics.org/illustrations/194">http://illustrativemathematics.org/illustrations/194</a>  <a href="http://illustrativemathematics.org/illustrations/195">http://illustrativemathematics.org/illustrations/195</a>  <a href="http://illustrativemathematics.org/illustrations/196">http://illustrativemathematics.org/illustrations/196</a>  <a href="http://illustrativemathematics.org/illustrations/197">http://illustrativemathematics.org/illustrations/197</a></p>
Represent mathematical situations		
DOK		2
ST		MA 4 1.10
<b>B</b>		<p><b>*apply the commutative and associative properties of addition to whole numbers <b>A2B1</b></b></p> <p style="text-align: center;"><b>Curriculum</b></p> <p>1. Explain and demonstrate commutative (<math>3+7</math> is the same as <math>7+3</math>) and associative <math>[(4+6) +1]</math> properties with manipulative</p> <p><b>2. Solve using parable “The Hidden Treasure” Matthew 13:44</b></p> <p><b>1.OA.3</b> Apply properties of operations as strategies to add and subtract. (Students need not use formal terms for these properties.) <i>Examples: If <math>8 + 3 = 11</math> is known, then <math>3 + 8 = 11</math> is also known. (Commutative property of addition.) To add <math>2 + 6 + 4</math>, the second two numbers can be added to make a ten, so <math>2 + 6 + 4 = 2 + 10 = 12</math>. (Associative property of addition.)</i></p> <p><b>1.NBT.4</b> Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.</p>
Describe and use mathematical manipulation		
DOK		2
ST		MA 4 1.10

# Algebraic Relationships

K/1

## 3. Use mathematical models to represent and understand quantitative relationships – integrate faith by using parable symbolism from the Bible.

	Kindergarten	Grade 1
Use mathematical models	<p><b>A</b> *<u>model</u> situations that involve whole numbers, using pictures, objects or symbols <b>A3AK</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <p>1. Throughout centers and while using manipulative, show work and explain process <b>K.CC.5</b> Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.  <a href="http://illustrativemathematics.org/illustrations/447">http://illustrativemathematics.org/illustrations/447</a></p> <p><b>K.OA.3</b> Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., <math>5 = 2 + 3</math> and <math>5 = 4 + 1</math>).  <a href="http://illustrativemathematics.org/illustrations/165">http://illustrativemathematics.org/illustrations/165</a>  <a href="http://illustrativemathematics.org/illustrations/166">http://illustrativemathematics.org/illustrations/166</a>  <a href="http://illustrativemathematics.org/illustrations/175">http://illustrativemathematics.org/illustrations/175</a>  <a href="http://illustrativemathematics.org/illustrations/176">http://illustrativemathematics.org/illustrations/176</a>  <a href="http://illustrativemathematics.org/illustrations/177">http://illustrativemathematics.org/illustrations/177</a></p> <p><b>K.OA.4</b> For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.</p>	<p>*<u>model</u> situations that involve the addition of whole numbers, using pictures, objects or symbols <b>A3A1</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <p>1. model situations that involve the addition of whole numbers through word problems on white boards and/or manipulative</p> <p>2. Solve using parable “The Closed Door” Luke 13:24-30</p> <p><b>1.OA.1</b> Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (See CCSS Glossary p. 88, Table 1.)  <a href="http://illustrativemathematics.org/illustrations/2">http://illustrativemathematics.org/illustrations/2</a>  <a href="http://illustrativemathematics.org/illustrations/160">http://illustrativemathematics.org/illustrations/160</a>  <a href="http://illustrativemathematics.org/illustrations/161">http://illustrativemathematics.org/illustrations/161</a>  <a href="http://illustrativemathematics.org/illustrations/162">http://illustrativemathematics.org/illustrations/162</a>  <a href="http://illustrativemathematics.org/illustrations/163">http://illustrativemathematics.org/illustrations/163</a>  <a href="http://illustrativemathematics.org/illustrations/194">http://illustrativemathematics.org/illustrations/194</a>  <a href="http://illustrativemathematics.org/illustrations/195">http://illustrativemathematics.org/illustrations/195</a>  <a href="http://illustrativemathematics.org/illustrations/196">http://illustrativemathematics.org/illustrations/196</a>  <a href="http://illustrativemathematics.org/illustrations/197">http://illustrativemathematics.org/illustrations/197</a></p> <p><b>1.OA.2</b> Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.  <a href="http://illustrativemathematics.org/illustrations/468">http://illustrativemathematics.org/illustrations/468</a></p> <p><b>1.NBT.4</b> Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.</p>
	<b>DOK</b>	<b>2</b>
<b>ST</b>	<b>MA 1 1.6</b>	<b>MA 1 1.6</b>

# Algebraic Relationships

K/1

<b>K.CC.4</b>	Understand the relationship between numbers and quantities; connect counting to cardinality. <a href="http://illustrativemathematics.org/illustrations/447">http://illustrativemathematics.org/illustrations/447</a>
<b>K.CC.4.b</b>	Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. <a href="http://illustrativemathematics.org/illustrations/447">http://illustrativemathematics.org/illustrations/447</a>
<b>K.CC.4.c</b>	Understand that each successive number name refers to a quantity that is one larger. <a href="http://illustrativemathematics.org/illustrations/447">http://illustrativemathematics.org/illustrations/447</a>
<b>K.OA.5</b>	Fluently add and subtract within 5.
<b>K.NBT.1</b>	Compose and decompose numbers from 11 to 19 into tens and ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$ ); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

**1. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships – integrate faith using Biblical patterns of geometry and shape.**

	Kindergarten	Grade 1
Describe and use geometric relationships	<p>*identify and describe 2- and 3-dimensional shapes using physical models (circle, rhombus, rectangle, triangle, sphere, rectangular prism, cylinder, pyramid) that represent shapes in their environment <b>G1AK</b></p> <p><b>G1A3</b> <i>*compare and analyze 2- dimensional shapes</i> by describing their attributes (circle, rectangle, rhombus, trapezoid, triangle)</p> <p style="text-align: center;"><b>Curriculum</b></p> <p>1. Identify and describe 2- and 3-dimensional shapes using physical models (circle, rhombus, triangle, sphere, rectangular prism, cylinder, pyramid, rectangle, trapezoid)</p> <ol style="list-style-type: none"> <li>Shape collages (paper punchers, construction paper)</li> <li>Review: Shape hop- Cut out different colored shapes out of craft paper and place them on the floor. Have children name the shapes as they hop on them.</li> <li>Musical shapes</li> <li>Show and tell shape from home</li> <li>Revelation Chapter 21</li> </ol> <p><b>K.G.1</b> Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p> <p><b>K.G.2</b> Correctly name shapes regardless of their orientations or overall size.</p> <p><b>K.G.3</b> Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).</p> <p><b>K.G.4</b> Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/”corners”) and other attributes (e.g., having sides of equal length).  <a href="http://illustrativemathematics.org/illustrations/515">http://illustrativemathematics.org/illustrations/515</a></p>	<p><b>*identify, name and describe 2- and 3-dimensional shapes using physical models (circle, triangle, trapezoid, rectangle, rhombus, sphere, rectangular prism, cylinder, pyramid)</b></p> <p><b>G1A1</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>Identify and describe 2- and 3-dimensional shapes using physical models (circle, rhombus, triangle, sphere, rectangular prism, cylinder, pyramid, rectangle, trapezoid)</li> <li>Shape collages (paper punchers, construction paper)</li> <li>Review: Shape hop- Cut out different colored shapes out of craft paper and place them on the floor. Have children name the shapes as they hop on them.</li> <li>Musical shapes</li> <li>Mystery bag sorting-separating flat surface objects and round objects</li> <li>Show and tell shape from home</li> <li>Shape detectives-hiding 3 dimensional item cards around room</li> </ol> <p><b>1.G.1</b> Distinguish between <b>defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size)</b>; build and draw shapes to possess defining attributes.</p>
	<p><b>DOK</b> 2</p> <p><b>ST</b> MA 2 1.10</p>	<p><b>DOK</b> 2</p> <p><b>ST</b> MA 2 1.10</p>

# Geometric and Spatial Relationships

K/1

1. Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships – continued - integrate faith using Biblical patterns of geometry and shape.		
	Kindergarten	Grade 1
C		*use models to compose and decompose 2-dimensional shapes <b>G1C1 G1C1</b>
		<p style="text-align: center;"><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>Shape walks finding and hiding 2 dimensional shapes</li> <li>Timed pick up and match.                             <p><b>K.G.6</b> Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”</p> <p><b>1.G.2</b> Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, <b>half-circles, and quarter-circles</b>) or three-dimensional shapes (<b>cubes, right rectangular prisms, right circular cones, and right circular cylinders</b>) to create a composite shape, and compose new shapes from the composite shape. (Students do not need to learn formal names such as "right rectangular prism".)</p> <p><b>1.G.1</b> Distinguish between <b>defining attributes</b> (e.g., <b>triangles are closed and three-sided</b>) versus <b>non-defining attributes</b> (e.g., <b>color, orientation, overall size</b>); build and draw shapes to possess defining attributes.</p> </li> </ol>
DOK		2
ST		MA 2 1.6

2. Specify locations and describe spatial relationships using coordinate geometry and other representational systems		
	Kindergarten	Grade 1
A	<p>*describe, name and interpret relative positions in space (above, below, front, behind)</p> <p><b>G2AK</b></p> <p style="text-align: center;"><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>Games such as: Simon Says, Hokey Pokey</li> <li>Create pictures by putting items in specific areas</li> </ol> <p><b>K.G.1</b> Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</p>	<p>*describe, name and interpret relative positions in space (left, right)</p> <p style="text-align: center;"><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>Finding letters in alphabet using terms left and right</li> <li>Simon says</li> <li>Create pictures by putting items in specific areas</li> <li>Create directions for objects in the room using verbiage</li> </ol>
ST	MA 2 1.10	MA 2 1.10

3. Apply transformations and use symmetry to analyze mathematical situations		
	Kindergarten	Grade 1
<b>A</b>	<p>*use manipulatives to recognize from different perspectives and orientations models of slides and turns</p> <p><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>1. Leader says-leader calls out slide, turn in different directions</li> <li>2. Slide, turn dance</li> <li>3. Give students different shapes. On lined paper, have student change shape as goes from one side of paper to next.</li> </ol>	<p><b>*use manipulative to model flips</b></p> <p><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>1. Leader says-leader calls out slide, turn, flip in different directions</li> <li>2. Slide, turn, and flip dance</li> <li>4. Give students different shapes. On lined paper, have student change shape as goes from one side of paper to next.</li> </ol>
Use transformations on objects		
DOK	2	2
ST	MA 2 1.6	MA 2 1.6
<b>C</b>		<p><b>*recognize shapes that have symmetry</b></p> <p><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>1. Recognize shapes that have symmetry               <ol style="list-style-type: none"> <li>a. Identify one line of symmetry.                   <ol style="list-style-type: none"> <li>1. Fold paper and cut out shapes. Create snowflakes.</li> <li>2. Paint one side of paper and fold in half. Use picture to tell story</li> </ol> </li> <li>b. Recognize similar shapes.                   <ol style="list-style-type: none"> <li>1. Creating picture with shapes.</li> <li>2. Sort shapes.</li> <li>3. Shape walk.</li> </ol> </li> <li>c. Find shapes in magazines</li> <li>d. Work with partner to create pictures with shapes that have symmetry</li> </ol> </li> </ol>
Use symmetry		
DOK		1
ST		MA 2 1.10

# Measurement

K/1

1. Understand measurable attributes of objects and the units, systems and processes of measurement – integrate faith by using the Bible to outline examples of measurement.		
	Kindergarten	Grade 1
A	<p><b>*compare and order objects according to their size or weight</b></p> <p><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>Discuss sizes of objects and allow students find objects around room/outside to meet such measurements.</li> <li>Compare and order two or three concrete objects according to length (shorter or longer) or weight (lighter or heavier) <b>M1AK M2AK</b></li> </ol> <p><b>K.MD.2</b> Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.  <a href="http://illustrativemathematics.org/illustrations/455">http://illustrativemathematics.org/illustrations/455</a>  <a href="http://illustrativemathematics.org/illustrations/456">http://illustrativemathematics.org/illustrations/456</a></p>	<p><b>*select the appropriate tool for the attribute being measured (size, temperature, time, weight)</b>  <b>M1AK M2AK M3AK</b></p> <p><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>Compare and order two or three concrete objects according to length (shorter or longer), capacity (holds more or holds less), or weight (lighter or heavier)</li> <li>Use thermometer to measure classroom temperature during circle time. Determine clothing on calendar based on temperature.</li> <li>Discuss sizes of objects and allow students find objects around room/outside to meet such measurements.</li> <li>Measure familiar objects by weight and other units of measurement.</li> <li>Have variety of tools scattered around room. Announce object being measured and have students scatter amongst room.</li> </ol> <p><b>1.MD.1</b> Order three objects by length; compare the lengths of two objects indirectly by using a third object.</p>
	Determine unit of measurement	
DOK	2	2
ST	MA 2 1.8	MA 2 3.1
C	<p><b>*describe passage of time using terms such as today, yesterday, tomorrow</b></p> <p><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>Circle time activities-calendar</li> <li>Make a class book about today, yesterday, and tomorrow</li> <li>Centers with day cards</li> <li>Cubit – Deuteronomy 3:11</li> <li>Pound – Ezra 2:29</li> </ol>	<p><b>*tell time to the nearest half hour M1C1</b></p> <p><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>Circle time activities such as telling time on board</li> <li>Make a class book about morning, noon, and night</li> <li>Centers with time cards</li> <li>Handbreath – Exodus 37:12</li> </ol> <p><b>1.MD.3</b> Tell and write time in hours and half-hours using analog and digital clocks.</p>
	Tell and use units of time	
DOK	2	1
ST	MA 2 3.1	MA 2 1.10

# Measurement

K/1

1. Understand measurable attributes of objects and the units, systems and processes of measurement -- continued		
	Kindergarten	Grade 1
<b>D</b>	*identify and know the value of a penny, nickel, dime, and quarter	*count money to a dolllar, including half dollars
<b>Count and compute money</b>	<p><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>1. Circle time-saying coin and amount. Finding coins in bag and bringing me the correct coin, coin amount classroom</li> <li>2. Money 4 Corner game</li> </ol>	<p><b>Curriculum</b></p> <ol style="list-style-type: none"> <li>1. Circle time-saying coin and amount.</li> <li>2. Finding coins in bag and bringing me the correct coin,</li> <li>3. Earning money to be spent at Kidzone (2<sup>nd</sup>/3<sup>rd</sup> grade)</li> </ol>
<b>DOK</b>	2	2
<b>ST</b>	MA 1 1.10	MA 1 1.10

# Measurement

K/1

2. Apply appropriate techniques, tools and formulas to determine measurements – integrate faith by using the Bible to outline examples of measurement and the tools used.		
	Kindergarten	Grade 1
A	*measure objects by comparison of lengths (shorter, same, longer)	*use repetition of a single unit to measure something larger than the unit, (e.g. length of book with paper clips) <b>M2A1</b>
	<p style="text-align: center;"><b>Curriculum</b></p> <p>1. Use paperclips, shells, erasers, and fun manipulative to measure items. Record by using items to represent number it took</p> <p>2. Compare and order two or three concrete objects according to length (shorter, same, longer)</p> <p>3. Span – measure of length – Exodus 28:16</p>	<p style="text-align: center;"><b>Curriculum</b></p> <p>1. Use paperclips, shells, erasers, and fun manipulative to measure items. Record by using items to represent number it took</p> <p>2. Use ruler to measure items around the room</p> <p>3. Compare and order two or three concrete objects according to length (shorter or longer), capacity (holds more or holds less), or weight (lighter or heavier)</p> <p><b>1.MD.2</b> Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. <i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i></p>
DOK	1	1
ST	MA 2 1.6	MA 2 1.10

<b>K.MD.1</b>	Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
---------------	---

# Data and Probability

1. Formulate questions that can be addressed with data and collect, organize and display relevant data to answer them – integrate faith by showing how The Word of God was “gathered” and “collected” to produce what we call the Holy Bible.		
	Kindergarten	Grade 1
<b>A</b>		<b>*pose questions and gather data about themselves and their surroundings</b>
Formulate questions		<b>Curriculum</b> 1. Gather data from students about favorite foods, colors, shapes, etc (students subject choice). Create graph based off of results.
DOK		3
ST		MA 3 1.2
<b>B</b>	<b>*sort items according to their <u>attributes</u></b>	<b>*sort and classify items according to their <u>attributes</u></b>
Classify and organize data	<b>Curriculum</b> 1. Sort items according to their attributes	<b>Curriculum</b> 1. Sort items according to their attributes 2. Intoruduction to how the Bible was created – the books gathered and the Word created.
DOK	2	3
ST	MA 2 1.8	MA 2 1.8
<b>C</b>	<b>*create graphs using physical objects</b>	<b>*represent <u>one-to-one correspondence</u> data using pictures and bar graphs</b>
Represent and interpret data	<b>Curriculum</b> 1. Picture graph favorites (color, activities, cartoons, summer activity, pets)-stickers to match	<b>Curriculum</b> 1. Represent one to one correspondence data using pictures and bar graphs a. Picture graph favorites (color, activities, cartoons, summer activity, pets)-stickers to match b. Graph favorites (color, activities, cartoons, summer activity, pets) c. Sort students by hair color, male or female, eye color, shoe color d. Answer questions about graphs. e. Present graphs and findings to class.
DOK	2	2
ST	MA 3 1.8	MA 3 1.8

