

*1<sup>st</sup> Grade Math*  
 1<sup>st</sup> Nine Weeks Curriculum Guide  
*Fentress County Schools*  
 Developed Summer 2009

Title: Math- Chapters 1- 7				Time Frame: 1 <sup>st</sup> 9 weeks	
Academic Vocabulary: This vocabulary is being updated by state department-to be provided.					
GLEs	Essential Questions	Resources	Common Experiences <i>The page numbers in this section refer to the teacher's manual.</i>	Checks for Understanding	Integrations/ Connections
Look for * that indicates the GLE or CFU is ongoing throughout the year.					
<b>*GLE 0106.1.1</b> Use mathematical language, symbols, and definitions while developing mathematical reasoning.	How would you explain to a friend what happens when you add 0 to a number?  Chapter 1	Harcourt Teacher's Manual Math Book  <a href="http://www.harcourtschool.com">www.harcourtschool.com</a>  <a href="http://illuminations.nctm.org/">http://illuminations.nctm.org/</a>  Harcourt Math Workbooks	Daily Routine-Estimating Pg. 5 A	✓ <b>*0106.1.8</b> Recognize the "word clues" and mathematical symbols for addition and subtraction.  <b>All Chapters</b>	
<b>*GLE 0106.1.2</b> Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution.	How would you prove that $5 + 3 = 8$ ?  Chapter 2	<a href="http://www.funbrain.com">www.funbrain.com</a>  <a href="http://internet4classrooms.com/math_element_index.htm">http://internet4classrooms.com/math_element_index.htm</a>	Alternative Teaching Strategy Pg. 35B	✓ <b>0106.1.8</b> Recognize the "word clues" and mathematical symbols for addition and subtraction.  <b>All Chapters</b>	

				<p>✓ <b>0106.1.9</b> Use age-appropriate books, stories, and videos to convey ideas of mathematics.</p> <p><b>All Chapters</b></p>	
<p><b>*GLE 0106.1.3</b> Develop independent reasoning to communicate mathematical ideas and derive algorithms and/or formulas.</p>	<p>What can you say about subtraction?</p> <p>Chapter 3</p>			<p>✓ <b>0106.1.8</b> Recognize the “word clues” and mathematical symbols for addition and subtraction. <b>All Chapters</b></p> <p>✓ <b>0106.1.9</b> Use age-appropriate books, stories, and videos to convey ideas of mathematics. <b>All Chapters</b></p>	
<p><b>*GLE 0106.1.4</b> Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies.</p>	<p>How are adding and subtracting alike? How are they different?</p> <p>Chapter 4</p>		<p>Model Problem Solving Pg. 107A</p>	<p>✓ <b>0106.1.8</b> Recognize the “word clues” and mathematical symbols for addition and subtraction.</p> <p><b>All Chapters</b></p>	

<p><b>*GLE 0106.1.6</b> Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely.</p>	<p>How can a number line help me count on?  Chapter 5</p>			<p>✓ <b>0106.1.8</b> Recognize the “word clues” and mathematical symbols for addition and subtraction. <b>All Chapters</b></p>	
<p><b>*GLE 0106.1.7</b> Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world.</p>	<p>How would you show your answer for double facts? Chapter 6</p>			<p>✓ <b>0106.1.8</b> Recognize the “word clues” and mathematical symbols for addition and subtraction. <b>All Chapters</b></p>	
<p><b>*GLE 0106.1.8</b> 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>How could you determine which way to ‘hop’ on a number line?  Chapter 7</p>			<p>✓ <b>0106.1.8</b> Recognize the “word clues” and mathematical symbols for addition and subtraction. <b>All Chapters</b></p>	
<p><b>GLE 0106.2.3</b> Develop strategies for learning basic addition facts and related subtraction facts.</p>				<p>✓ <b>0106.2.7</b> Develop fluency with addition and subtraction facts of sums through ten. <b>Chapter 2, Chapter 4</b> ✓ <b>0106.2.8</b> Relate “counting on” and “counting back” to addition and subtraction and understand them as inverse operations. <b>All Chapters</b></p>	

				<p>✓ <b>0106.2.10</b> Use models (such as discrete objects, connecting cubes, and number lines) to represent “part-whole,” “adding to,” “taking away from,” and “comparing to” situations to develop understanding of the meaning of addition and subtraction. <b>All Chapters</b></p> <p>✓ <b>0106.2.12</b> Use various models to develop strategies for solving arithmetic problems. <b>Chapter 5</b></p>	
<p><b>GLE 0106.3.1</b> Identify, describe, and extend simple number patterns to develop strategies for adding and subtracting whole numbers.</p>				<p>✓ <b>0106.3.1</b> Find repeating patterns on the number line, addition table, and hundreds chart. <b>Chapter 5</b></p> <p>✓ <b>0106.3.9</b> Recognize that zero is the identity element for addition. <b>All Chapters</b></p>	

*1<sup>st</sup> Grade Math*  
 2<sup>nd</sup> Nine Weeks Curriculum Guide  
*Fentress County Schools*  
 Developed Summer 2009

Title: Math Chapters 8- 14					Time Frame: 2 <sup>nd</sup> 9 weeks
Academic Vocabulary: This vocabulary is being updated by state department-to be provided.					
GLEs	Essential Questions	Resources	Common Experiences	Checks for Understanding	Integrations/ Connections
Look for * GLE that are continually addressed throughout the year.			<i>The page numbers in this section are dealing with teacher's manual.</i>		
<b>*GLE 0106.1.1</b> Use mathematical language, symbols, and definitions while developing mathematical reasoning.	<b>Chapter 8</b> How would you explain 8-4= to a friend?	Harcourt Teacher's Math Manual	Alternative Teaching Strategy Pg. 137 B	✓ <b>0106.1.8</b> Recognize the "word clues" and mathematical symbols for addition and subtraction. <b>Chapter 8</b>	
<b>*GLE 0106.1.2</b> Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution.	<b>Chapter 9</b> How can you construct a bar graph?  <b>Chapter 10</b> Can you distinguish between tens and ones?	Harcourt Math Workbooks <a href="http://www.harcourtschool.com">www.harcourtschool.com</a>  <a href="http://www.illuminations.nctm.org">www.illuminations.nctm.org</a>  <a href="http://www.funbrain.com">www.funbrain.com</a>  <a href="http://internet4classrooms.com/math_element_index.htm">http://internet4classrooms.com/math_element_index.htm</a>	Model Skip Counting Pg. 193 A  Modeling Sums and Differences Pg. 233A	✓ <b>0106.1.8</b> Recognize the "word clues" and mathematical symbols for addition and subtraction. <b>Chapter 8</b>	

<p><b>*GLE 0106.1.4</b> Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies.</p>	<p><b>Chapter 11</b> How would you prove if a number is greater than or less than another number?</p> <p><b>Chapter 12</b> What would come next if I was skip counting by 5s and stopped at 60?</p>			<p>✓ <b>0106.1.8</b> Recognize the “word clues” and mathematical symbols for addition and subtraction. <b>Chapter 8</b></p>	
<p><b>*GLE 0106.1.6</b> Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely.</p>	<p><b>Chapter 13</b> What choice would you have made if your friend asked you to give</p>			<p>✓ <b>0106.1.8</b> Recognize the “word clues” and mathematical symbols for addition and subtraction. <b>Chapter 8</b></p>	

	him 9 of your 12 dinosaurs?				
<b>*GLE 0106.1.7</b> Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world.	<b>Chapter 14</b> What questions would you ask in an interview with the person who invented addition?			✓ <b>0106.1.8</b> Recognize the “word clues” and mathematical symbols for addition and subtraction. <b>Chapter 8</b>	
<b>*GLE 0106.1.8</b> Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.				✓ <b>*0106.1.8</b> Recognize the “word clues” and mathematical symbols for addition and subtraction. <b>All Chapters</b>	
<b>GLE 0106.2.3</b> Develop strategies for learning basic addition facts and related subtraction facts.				✓ <b>0106.2.8</b> Relate “counting on” and “counting back” to addition and subtraction and understand them as inverse operations. <b>Chapter 8</b>	

				<p>✓ <b>0106.2.9</b> Add three single-digit numbers. <b>Chapter 13</b></p> <p>✓ <b>0106.2.10</b> Use models (such as discrete objects, connecting cubes, and number lines) to represent “part-whole,” “adding to,” “taking away from,” and “comparing to” situations to develop understanding of the meaning of addition and subtraction. <b>Chapter 8</b></p>	
<p><b>GLE 0106.3.1</b> Identify, describe, and extend simple number patterns to develop strategies for adding and subtracting whole numbers.</p>				<p>✓ <b>0106.3.8</b> Determine whether a number is odd or even by pairing objects. <b>Chapter 12</b></p> <p>✓ <b>0106.3.9</b> Recognize that zero is the identity element for addition. <b>Chapter 8</b></p>	
<p><b>GLE 0106.5.1</b> Use various representations to display and compare data.</p>				<p>✓ <b>0106.5.1</b> Represent measurements and discrete data using concrete objects, picture</p>	<p><b>CHAPTER 9</b> <b>Science-</b> <b>Technology A</b> <b>Closer Look</b></p>

				<p>graphs, and bar graphs.  <b>Chapter 9</b>  ✓ <b>0106.5.2</b> Represent data in both horizontal and vertical form.  <b>Chapter 9</b>  ✓ <b>0106.5.3</b> Display data using appropriate titles and labels. <b>Chapter 9</b>  ✓ <b>0106.5.4</b> Count and compare collected data.  <b>Chapter 9</b></p>	<p>Lesson 2  TE pg. 300 <i>Tech Activity</i>   Science</p>
<p><b>GLE 0106.4.1</b>  Recognize, describe, and draw geometric figures.</p>				<p>✓ <b>0106.1.10</b> Match the spoken, written, concrete, and pictorial representations of whole numbers, one-half, and one-fourth. <b>Chapter 10</b></p>	
<p><b>GLE 0106.2.1</b>  Understand and use number notation and place value to 100.</p>				<p>✓ <b>0106.2.1</b> Read and write numerals up to 100.  <b>Chapter 10, 11</b></p>	
<p><b>GLE 0106.2.2</b> Compare and order whole numbers to 100.</p>				<p>✓ <b>0106.2.2</b> Write numbers up to 10 in words.  <b>Chapter 10</b></p> <p>✓ <b>0106.2.3</b> Count forward and backward by ones beginning with any number less than 100.</p>	

				<p><b>Chapter 11</b></p> <p>✓ <b>0106.2.4</b> Skip count by twos, fives, and tens. <b>Chapter 12</b></p> <p>✓ <b>0106.2.5</b> Order and compare (less than, greater than, or equal to) whole numbers to 100. <b>Chapter 11</b></p> <p>✓ <b>0106.2.6</b> Recognize the place value of numbers (tens, ones). <b>Chapter 10</b></p> <p>✓ <b>0106.2.15</b> Represent whole numbers between 10 and 100 in groups of tens and ones. <b>Chapter 10</b></p> <p>✓ <b>0106.2.16</b> Represent whole numbers up to 100 on a number line. <b>Chapter 11</b></p>	
<b>GLE 0106.2.3</b> Develop strategies for learning basic addition facts and related subtraction facts.				<p>✓ <b>0106.2.17</b> Use the number line to create visual representations of sequences (such as even numbers, tens, multiples of five). <b>Chapter 11</b></p>	

<p><b>GLE 0106.3.1</b> Identify, describe, and extend simple number patterns to develop strategies for adding and subtracting whole numbers.</p>				<p>✓ <b>0106.3.1</b> Find repeating patterns on the number line, addition table, and hundreds chart. <b>Chapter 13</b></p> <p>✓ <b>0106.3.2</b> Determine a reasonable next term in a given sequence and describe the rule. <b>Chapter 14</b></p> <p>✓ <b>0106.3.3</b> Use objects to illustrate the commutative property with basic facts and show that subtraction is not commutative. <b>Chapter 13</b></p>	
<p><b>GLE 0106.3.2</b> Understand that addition and subtraction are inverse operations.</p>				<p>✓ <b>0106.3.4</b> Demonstrate understanding of the basic equation <math>a + b = c</math> by using objects to illustrate the number sentences (fact families) associated with any particular sum. <b>Chapter 13, 14</b></p> <p>✓ <b>0106.3.5</b> Use various strategies to find unknowns in problems</p>	

				involving addition and subtraction. <b>Chapter 13, 14</b> ✓ <b>0106.3.6</b> Use objects to demonstrate the inverse relationship between addition and subtraction. <b>Chapter 13, 14</b>	
<b>GLE 0106.3.3</b> Extend the strategies for basic facts to include other properties of number and operations.				✓ <b>0106.3.7</b> Use the inverse relation between addition and subtraction to check arithmetic problems. <b>Chapter 13, 14</b>	

*1<sup>st</sup> Grade Math*  
 3<sup>rd</sup> Nine Weeks Curriculum Guide  
*Fentress County Schools*  
 Developed Summer 2009

Title: Math Chapters 15-22				Time Frame: 3 <sup>rd</sup> 9 weeks	
Academic Vocabulary: This vocabulary is being updated by state department-to be provided.					
GLEs Look for GLEs with * that are addressed throughout the year.	Essential Questions	Resources	Common Experiences <i>The page numbers in this section refer to the teacher's manual.</i>	Checks for Understanding	Integrations/Connections
* <b>GLE 0106.4.1</b> Recognize, describe, and draw geometric figures.	<p><b>Chapter 15</b> What questions would you ask in an interview with solid shapes?</p> <p><b>Chapter 16</b> How do you know if an object is opened or closed?</p>	<p>Harcourt Teacher's Math Manual</p> <p>Harcourt Math Workbooks</p> <p><a href="http://www.harcourtschool.com">www.harcourtschool.com</a></p> <p><a href="http://www.illumination.nctm.org">www.illumination.nctm.org</a></p> <p><a href="http://www.funbrain.com">www.funbrain.com</a></p> <p><a href="http://internet4classrooms.com/math_elem_index.htm">http://internet4classrooms.com/math_elem_index.htm</a></p>	<p>From Solids to Planes Pg. 255A</p> <p>Alternative Teaching Strategy Pg. 303B</p> <p>Alternative Teaching Strategy Pg. 357B</p>	<p>✓ <b>0106.4.1</b> Recognize and describe similarities and differences between 2-dimensional figures (geometric attributes and properties). <b>Chapter 15</b></p> <p>✓ <b>0106.4.2</b> Recognize 2- and 3-dimensional figures from different perspectives and orientations. <b>Chapter 15</b></p> <p>✓ <b>0106.4.4</b> Identify 2-dimensional shapes as faces of 3-dimensional figures. <b>Chapter 15</b></p>	


<p><b>GLE 0106.4.2</b> Compose and decompose geometric shapes.</p>	<p><b>Chapter 17</b> What would happen if I didn't know the base unit of a pattern?</p>			<p>✓ <b>0106.4.3</b> Model part-whole relationships and properties of plane and solid figures by combining two or more shapes to make a larger shape or by breaking apart an object into its smaller shapes. <b>Chapter 15</b></p>	
<p><b>*GLE 0106.1.7</b> Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world.</p>	<p><b>Chapter 18</b> What would result if I add <math>3+2+6=?</math></p> <p><b>Chapter 19</b> What would result if <math>18-5=?</math></p>			<p>✓ <b>0106.1.7</b> Apply spatial sense to recreate a figure from memory. <b>Chapter 16</b></p>	
<p><b>*GLE 0106.1.8</b> 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><b>Chapter 20</b> How could I use the Internet to find the sum of <math>20+13=?</math></p> <p><b>Chapter 21</b> How would you design a model to show <math>\frac{1}{4}</math> ?</p>			<p>✓ <b>0106.1.7</b> Apply spatial sense to recreate a figure from memory. <b>Chapter 16</b></p>	

	<b>Chapter 22</b> How is a nickel related to a dime?				
<b>GLE 0106.3.3</b> Extend the strategies for basic facts to include other properties of number and operations.				✓ <b>0106.3.2</b> Determine a reasonable next term in a given sequence and describe the rule. <b>Chapter 17</b>	
<b>*GLE 0106.3.1</b> Identify, describe, and extend simple number patterns to develop strategies for adding and subtracting whole numbers.				✓ <b>0106.3.3</b> Use objects to illustrate the commutative property with basic facts and show that subtraction is not commutative. <b>Chapter 18, 19, 20</b>	
<b>GLE 0106.3.2</b> Understand that addition and subtraction are inverse operations.				✓ <b>0106.3.4</b> Demonstrate understanding of the basic equation $a + b = c$ by using objects to illustrate the number sentences (fact families) associated with any particular sum. <b>Chapter 18, 19,20</b> ✓ <b>0106.3.5</b> Use various strategies to find unknowns in problems involving addition and subtraction. <b>Chapter 18, 19,20</b>	

				<p>✓ <b>0106.3.6</b> Use objects to demonstrate the inverse relationship between addition and subtraction. <b>Chapter 18,19,20</b></p>	
<p><b>GLE 0106.3.3</b> Extend the strategies for basic facts to include other properties of number and operations.</p>				<p>✓ <b>0106.3.7</b> Use the inverse relation between addition and subtraction to check arithmetic problems. <b>Chapter 18,19, 20</b></p>	
<p><b>*GLE 0106.1.7</b> Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world.</p>				<p>✓ <b>0106.1.4</b> Count the value of a set of coins up to fifty cents. <b>Chapter 22</b></p> <p>✓ <b>0106.1.10</b> Match the spoken, written, concrete, and pictorial representations of whole numbers, one-half, and one-fourth. <b>Chapter 21</b></p>	<p><b>CHAPTER 22</b> <b>Science-</b> Technology A Closer Look Lesson 2 TE pgs. 302-303 <i>Technology in Action</i></p>
<p><b>*GLE 0106.1.8</b> 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>✓ <b>0106.1.4</b> Count the value of a set of coins up to fifty cents. <b>Chapter 22</b></p> <p>✓ <b>0106.1.10</b> Match the spoken, written, concrete, and pictorial representations of whole numbers, one-half, and one-fourth. <b>Chapter 21</b></p>	

<b>GLE 0106.2.1</b> Understand and use number notation and place value to 100.				✓ <b>0106.2.11</b> Recognize the “part-whole” relationship in representations of basic fractions such as $\frac{1}{2}$ and $\frac{1}{4}$ . <b>Chapter 21</b>	
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*1<sup>st</sup> Grade Math*  
 4<sup>th</sup> Nine Weeks Curriculum Guide  
 Fentress County Schools  
 Developed Summer 2009

Title: Math Chapters 23-30				Time Frame: 4 <sup>th</sup> 9 weeks	
Academic Vocabulary: This vocabulary is being updated by state department-to be provided.					
 GLEs with * mean that they are addressed throughout the year.	Essential Questions	Resources	Common Experiences <i>The page numbers in this section are dealing with teacher's manual.</i>	Checks for Understanding	Integrations/Connections
<b>GLE 0106.1.7</b> Recognize the historical development of mathematics, mathematics in context, and the connections between mathematics and the real world.	<b>Chapter 23</b> How would you show ___ cents?  <b>Chapter 24</b> Can you list the parts of a clock?  <b>Chapter 25</b> How would you use a calendar?	Harcourt Teacher's Math Manual  Harcourt Workbooks  <a href="http://www.harcourtchool.com">www.harcourtchool.com</a>	Graphing Pg. 385 A	✓ <b>0106.1.4</b> Count the value of a set of coins up to fifty cents. <b>Chapter 23</b>  ✓ <b>0106.1.5</b> Use a thermometer to measure temperature. <b>Chapter 28</b>	
<b>GLE 0106.1.8</b> Use technologies/manipulatives appropriately to develop understanding of mathematical algorithms, to facilitate problem solving, and to create accurate and reliable models of mathematical concepts.	<b>Chapter 26</b> What is the relationship between inches and a foot?  <b>Chapter 27</b> How would you measure the weight of a baby?	<a href="http://www.illumination.s.nctm.org">www.illumination.s.nctm.org</a>  <a href="http://www.funbrain.com">www.funbrain.com</a>  <a href="http://internet4classrooms.com/math_elem_index.htm">http://internet4classrooms.com/math_elem_index.htm</a>	Alternative Teaching Strategy Pg. 401 B  Estimate Weight Pg. 459A	✓ <b>0106.1.4</b> Count the value of a set of coins up to fifty cents. <b>Chapter 23</b>  ✓ <b>0106.1.5</b> Use a thermometer to measure temperature. <b>Chapter 28</b>  ✓ <b>0106.1.6</b> Recognize	

				scales as a way of measuring weight. <b>Chapter 27</b>	
<b>GLE 0106.1.5</b> Use mathematical ideas and processes in different settings to formulate patterns, analyze graphs, set up and solve problems and interpret solutions.	<b>Chapter 28</b> Would it be better to measure the length of a car using paper clips or a tape measure?			✓ <b>0106.1.3</b> Compare units of time. <b>Chapter 24</b>  ✓ <b>0106.1.6</b> Recognize scales as a way of measuring weight. <b>Chapter 27</b>	
<b>GLE 0106.1.6</b> Read and interpret the language of mathematics and use written/oral communication to express mathematical ideas precisely.	<b>Chapter 29</b> How would you determine 29-13=?	<a href="http://www.time-for-time.com/interactive.htm">http://www.time-for-time.com/interactive.htm</a>  <a href="http://www.arcytech.org/java/clock/clock.html">http://www.arcytech.org/java/clock/clock.html</a>		✓ <b>0106.1.1</b> Describe the relationship between days and months. <b>Chapter 25</b> ✓ <b>0106.1.2</b> Read and write time to the hour, half-hour, and quarter-hour. <b>Chapter 24</b>	
<b>GLE 0106.4.3</b> Use non-standard units in linear measurement.	<b>Chapter 30</b> What would happen if I put 8 red buttons and 1 blue button in a cup and picked 1 button out?			✓ <b>0106.4.5</b> Estimate and measure length using non-standard units (counting by using groups of tens and ones) to represent addition. <b>Chapter 26</b> ✓ <b>0106.4.6</b> Recognize the essential role of units in measurement, and understand the difference between standard and non-standard units. <b>Chapter 26</b> ✓ <b>0106.4.7</b> Understand and use comparative words such as long, longer, longest;	

				short, shorter, shortest; tall, taller, tallest; high, higher, highest. <b>Chapter 26</b>	
<b>GLE 0106.2.4</b> Use multiple representations (including groups of ten) to model two-digit addition and subtraction.				<ul style="list-style-type: none"> <li>✓ <b>0106.2.13</b> Solve problems that require addition and subtraction of numbers through 100. <b>Chapter 29</b></li> <li>✓ <b>0106.2.14</b> Use composition and decomposition of numbers to identify and discuss patterns. <b>Chapter 29</b></li> </ul>	
<b>GLE 0106.5.1</b> Use various representations to display and compare data.				<ul style="list-style-type: none"> <li>✓ <b>0106.5.1</b> Represent measurements and discrete data using concrete objects, picture graphs, and bar graphs. <b>Chapter 30</b></li> <li>✓ <b>0106.5.2</b> Represent data in both horizontal and vertical form. <b>Chapter 30</b></li> <li>✓ <b>0106.5.3</b> Display data using appropriate titles and labels. <b>Chapter 30</b></li> <li>✓ <b>0106.5.4</b> Count and compare collected data. <b>Chapter 30</b></li> </ul>	