

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Numeration (Topic 1)		<b>Unit #: 1</b>
<b>Course or Grade Level:</b> 3 <sup>rd</sup> Grade Math		<b>Length of Time:</b> 2weeks, 4 days
<b>Date Created:</b> January 13, 2012		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1- 1 day benchmark assessment administration Week #2- 2 days benchmark assessment administration Week #2- Lessons 1.2 , 1.3, & 1.4 (lesson 1.1 can be reviewed in 1.2) Week #3- Supplemental lessons 1.5A and 1.5B; 1.6; 1.7; & 1.8 Week #4-Lesson 1.9, Review, and Topic Test 2013-2014 Dates: Sep. 5 through Sep. 25  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How can you read and write 4-digit numbers?</li> <li>• How can you read and write greater numbers?</li> <li>• How can place value help you compare whole numbers?</li> <li>• How can you order numbers?</li> <li>• How do you count money?</li> <li>• How do you count to make change?</li> <li>• How can you solve problems by making an organized list?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Thousands (lesson 1.2)</li> <li>• Greater Numbers (lesson 1.3)</li> <li>• Ways to Name Numbers (lesson 1.4)</li> <li>• Understanding Number Lines (supplemental lesson 1.5A)</li> <li>• Counting on the Number Lines (supplemental lesson 1.5B)</li> <li>• Comparing Numbers (lesson 1.5)</li> <li>• Ordering Numbers (lesson 1.6)</li> <li>• Counting Money (lesson 1.7)</li> <li>• Making Change (lesson 1.8)</li> <li>• Problem Solving: Make an Organized List (lesson 1.9)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Read and Write Numbers in the Thousands.</li> <li>• Read and Write numbers in the Ten and Hundred Thousands.</li> <li>• Compare 3-digit and 4-digit Whole Numbers.</li> <li>• Order 3-digit and 4-digit Whole Numbers.</li> <li>• Find the Value of Money, including \$5 and \$1 bills, Half Dollars, Quarters, Dimes, Nickels, and Pennies.</li> <li>• Use Coins and Bills to figure out the change they should receive after purchasing an item.</li> <li>• Make an Organized List to represent information given in a problem.</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	

<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucces.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> <li>• Teacher Text</li> <li>• Manipulatives</li> </ul>

**Common Core State Standards**

**Grade or Conceptual Category (HS only): Third**

**Domain (name and #): Number and Operations in Base Ten 3.NBT**

<b>Cluster: Use place value understanding and properties of operations to perform multi-digit arithmetic.</b>	<b>3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.</b>
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- Math Practices:**
- Make sense of problems and persevere in solving them.
  - Reason abstractly and quantitatively.
  - Construct viable arguments and critique the reasoning of others.
  - Model with mathematics.
  - Use appropriate tools strategically.
  - Attend to precision.
  - Look for and make use of structure.
  - Look for and express regularity in repeated reasoning.

**21<sup>st</sup> Century Themes**

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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**21<sup>st</sup> Century Skills**

	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Combining some lessons from topics 2 & 3 to create unit:		<b>Unit 2</b>
<b>Number Sense: Addition and Subtraction</b>		
<b>Course or Grade Level: 3<sup>rd</sup> Grade Math</b>		<b>Length of Time: 1 week, 3 days</b>
<b>Date Created: January 13, 2012</b>		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week#1- Lessons 2.1 & 2.3 Week #1- Lessons 3.3; 2.4; 2.5: & 3.4; Review October 7- Topic Test 2013-2014 Dates: Sep. 26 through Oct. 7  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How can the addition properties be used to show relationships that always hold true?</li> <li>• How can you break apart numbers or make a ten to add 2-digit numbers using mental math?</li> <li>• How can you round numbers?</li> <li>• How can you estimate sums and differences?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Addition Meaning and Properties (Lesson 2.1)</li> <li>• Using Mental Math to Add (Lesson 2.3)</li> <li>• Using Mental Math to Subtract (Lesson 3.3)</li> <li>• Rounding (Lesson 2.4)</li> <li>• Estimating Sums (Lesson 2.5)</li> <li>• Estimating Differences (Lesson 3.4)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Use concrete materials and concepts of addition to model the Commutative, Associative, and Identity Properties of Addition.</li> <li>• Solve problems by adding or subtracting with mental math.</li> <li>• Round two-digit and three-digit whole numbers to the nearest ten or hundred, by comparing to the number halfway between, or by using place value.</li> <li>• Estimate sums or differences</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucces.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> <li>• Teacher Text</li> <li>• Manipulatives</li> </ul>	

**Common Core State Standards**

**Grade or Conceptual Category (HS only): Third**

**Domain (name and #): Number and Operations in Base Ten 3.NBT**

<b>Cluster: Use place value understanding and properties of operations to perform multi-digit arithmetic.</b>	<p><b>Standard: 3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.</b></p> <p><b>Standard: 3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.</b></p>
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**Domain (name and #): Operations and Algebraic Thinking**

<b>Cluster: Solve problems involving the four operations, and identify and explain patterns in arithmetic</b>	<p><b>3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</b></p> <p><b>3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. <i>For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i></b></p>
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- Math Practices:**
- Make sense of problems and persevere in solving them.
  - Reason abstractly and quantitatively.
  - Construct viable arguments and critique the reasoning of others.
  - Model with mathematics.
  - Use appropriate tools strategically.
  - Attend to precision.
  - Look for and make use of structure.
  - Look for and express regularity in repeated reasoning.

**21<sup>st</sup> Century Themes**

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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**21<sup>st</sup> Century Skills**

	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Take lessons from topics 2 and 4 to create unit: <b>Using Place Value to Add and Subtract</b>		<b>Unit #: 3</b>
<b>Course or Grade Level:</b> 3 <sup>rd</sup> Grade Math		<b>Length of Time:</b> 2 weeks, 3 days
<b>Date Created:</b> January 13, 2012		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1- Supplemental lesson 2.7A; Lessons 2.7 & 2.8 Week #2- Lessons 2.9; 2.10; Supplemental lesson 4.3A; Lesson 4.3 Week #3- Lessons 4.4; 4.5; 4.6 & Review Oct. 21 & 22: Review and Topic Test 2013-2014 Dates: Oct. 8 through Oct. 22  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How can the addition properties be used to show relationships that always hold true?</li> <li>• How can you break apart numbers or make a ten to add 2-digit numbers using mental math?</li> <li>• How can you round numbers?</li> <li>• How can you estimate sums and differences?</li> <li>• How can you use addition to solve problems?</li> <li>• How can you add 3-digit numbers?</li> <li>• How can you solve a problem by drawing a picture?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Adding with an Expanded Algorithm(supplemental lesson 2.7A)</li> <li>• Models for Adding 3-digit Numbers (lesson 2.7)</li> <li>• Adding 3-digit Numbers(lesson 2.8)</li> <li>• Adding 3 or more Numbers (Lesson 2.9)</li> <li>• Problem Solving: Draw a Picture (Lesson 2.10)</li> <li>• Subtracting with an Expanded Algorithm (supplemental lesson 4.3A)</li> <li>• Models for Subtracting 3-digit Numbers(lesson 4.3)</li> <li>• Subtracting 3-digit Numbers (Lesson 4.4)</li> <li>• Subtracting Across Zero (Lesson 4.5)</li> <li>• Problem Solving: Draw a Picture and Write a Number Sentence (Lesson 4.6)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Add and subtract 3-digit numbers using place-value blocks or pictures and record the results using the expanded or standard addition algorithm.</li> <li>• Add and subtract 3-digit numbers using paper-and-pencil methods and use addition to solve problems.</li> <li>• Add 3 or more 2-and/or 3-digit numbers using paper-and-pencil methods and use addition to solve problems.</li> <li>• Draw a picture to solve a problem.</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	

<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucces.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> <li>• Teacher Text</li> <li>• Manipulatives</li> </ul>
<b>Common Core State Standards</b>	
<b>Grade or Conceptual Category (HS only): Third</b>	
<b>Domain (name and #): Number and Operations in Base Ten 3.NBT</b>	
<b>Cluster: Use place value understanding and properties of operations to perform multi-digit arithmetic.</b>	<p><b>Standard: 3.NBT.1</b> Use place value understanding to round whole numbers to the nearest 10 or 100.</p> <p><b>Standard: 3.NBT.2</b> Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.</p>
<b>Domain (name and #): Operations and Algebraic Thinking</b>	
<p><b>Cluster: Represent and solve problems involving multiplication and division</b></p> <p><b>Cluster: Understand properties of multiplication and the relationship between multiplication and division</b></p> <p><b>Cluster: Solve problems involving the four operations, and identify and explain patterns in arithmetic</b></p>	<p><b>Standard: 3.OA.1</b> Interpret products of whole numbers, e.g. interpret <math>5 \times 7</math> as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as <math>5 \times 7</math></i></p> <p><b>Standard: 3.OA.3</b> Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g. by using drawings and equations with a symbol for the unknown number to represent the problem</p> <p><b>Standard 3.OA.5</b> Apply properties of operations as strategies to multiply and divide</p> <p><b>3.OA.9</b> Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. <i>For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i></p>
<p><b>Math Practices:</b></p> <ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Model with mathematics.</li> <li>• Use appropriate tools strategically.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> <li>• Look for and express regularity in repeated reasoning.</li> </ul>	
<b>21<sup>st</sup> Century Themes</b>	

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
<u>21<sup>st</sup> Century Skills</u>							
	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Take lessons from Topic 5 to create unit: <b>Meanings of Multiplication</b>		<b>Unit #: 4</b>
<b>Course or Grade Level:</b> 3 <sup>rd</sup> Grade Math		<b>Length of Time:</b> 1 week, 2days
<b>Date Created:</b> January 13, 2012		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Lessons 5.1; 5.2; & 5.3 Week #2: Lessons 5.4; & 5.5; Review and Topic Test 2013-2014 Dates: Oct. 23 through Nov. 1  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How can you find the total number of objects in equal groups?</li> <li>• What are arrays, and how do they show multiplication?</li> <li>• How can you use multiplication to compare?</li> <li>• How can you write a story to describe a multiplication fact?</li> <li>• How do you write a good mathematical explanation?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Multiplication as Repeated Addition (lesson 5.1)</li> <li>• Arrays and Multiplication (lesson 5.2)</li> <li>• Using Multiplication to Compare (lesson 5.3)</li> <li>• Writing Multiplication Stories (lesson 5.4)</li> <li>• Problem Solving: Writing to Explain (lesson 5.5)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Write multiplication number sentences for given equal group situations, using the x symbol.</li> <li>• Write multiplication sentences for arrays, use arrays to find products, and use the Commutative Property of Multiplication.</li> <li>• Use models and write multiplication sentences to compare amounts.</li> <li>• Write math stories for given multiplication facts.</li> <li>• Use objects, words, pictures, numbers, and technology to provide a written explanation reflecting their understanding.</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsuccess.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> </ul>	



	<ul style="list-style-type: none"> <li>• Teacher Text</li> <li>• Manipulatives (Place Value Blocks)</li> </ul>
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**Common Core State Standards**

**Grade or Conceptual Category (HS only): Third**

**Domain (name and #): Operations and Algebraic Thinking**

<p><b>Cluster: Represent and solve problems involving multiplication and division</b></p>	<p><b>Standard: 3.OA.1 Interpret products of whole numbers, e.g. interpret <math>5 \times 7</math> as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as <math>5 \times 7</math></i></b></p>
<p><b>Cluster: Understand properties of multiplication and the relationship between multiplication and division</b></p>	<p><b>Standard: 3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g. by using drawings and equations with a symbol for the unknown number to represent the problem</b></p> <p><b>Standard 3.OA.5 Apply properties of operations as strategies to multiply and divide</b></p>
<p><b>Cluster: Solve problems involving the four operations, and identify and explain patterns in arithmetic</b></p>	<p><b>3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. <i>For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i></b></p>

- Math Practices:**
- Make sense of problems and persevere in solving them.
  - Reason abstractly and quantitatively.
  - Construct viable arguments and critique the reasoning of others.
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**21<sup>st</sup> Century Themes**

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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**21<sup>st</sup> Century Skills**

Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Take lessons from topic 5 to create new unit: <b>Multiplication</b>		<b>Unit #:5</b>
<b>Facts: Use Patterns</b>		
<b>Course or Grade Level: 3<sup>rd</sup> Grade Math</b>		<b>Length of Time: 1 week, 3 days</b>
<b>Date Created: January 13, 2012</b>		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Lessons 5.6; 5.7 & supplemental lesson 5.8A Week #2: Lessons 5.8; 5.9; 5.10; Review and Topic Test 2013-2014 Dates: Nov. 4 through Nov. 15  <b>Daily Warm-up: Windows/Test Prep: Please make sure to include concepts from 9.1 Repeating Patterns, 9.2 Number Sequences, 9.3 Extending Tables and 9.6 Geometric Patterns</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How can you use patterns to multiply by 2 and 3?</li> <li>• What are the patterns in multiples of 10?</li> <li>• How can patterns be used to find 9s facts?</li> <li>• What are the patterns in multiples of 1 and 0?</li> <li>• How can you tell when you need to answer more than one question to solve a problem?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• 2 and 5 as Factors (lesson 5.6)</li> <li>• 10 as a Factor (lesson 5.7)</li> <li>• Multiplying by Multiples of 10 (supplemental lesson 5.8A)</li> <li>• 9 as a Factor (lesson 5.8)</li> <li>• Multiplying with 0 &amp; 1 (lesson 5.9)</li> <li>• Problem Solving: Two-Question Problems (lesson 5.10)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Use patterns to multiply with 2 and 5 as factors</li> <li>• Use patterns to multiply with 10 as factor</li> <li>• Use patterns to multiply with 9 as a factor</li> <li>• Use patterns and properties to multiply with 0 and 1 as factors</li> <li>• Solve for one problem and use the solution to complete a second problem</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucces.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> <li>• Teacher Text</li> <li>• Manipulatives (Place Value Blocks)</li> </ul>	
<b>Common Core State Standards</b>		

<b>Grade or Conceptual Category (HS only): Third</b>							
<b>Domain Operations and Algebraic Thinking 3.OA 3.NBT Number and Operations in Base Ten</b>							
<b>Cluster: Cluster: Represent and solve problems involving multiplication and division</b>  <b>Cluster: Multiply and divide within 100</b>  <b>Cluster: Solve problems involving the four operations, and identify and explain patterns in arithmetic</b>  <b>Cluster: Use place value understanding and properties of operations to perform multi-digit arithmetic</b>	<b>Standard: 3.OA.3 Use multiplication and division with in 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g. by using drawings and equations with a symbol for the unknown number to represent the problem</b>						
	<b>3.OA.7 fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g. knowing that <math>8 \times 5 = 40</math>, one know <math>40/5 = 8</math>) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.</b>						
	<b>3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</b>						
	<b>3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. <i>For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i></b>						
	<b>3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g. <math>9 \times 80</math>, <math>5 \times 60</math>) using strategies based on place value and properties of operations</b>						
<b>Math Practices:</b>							
<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Model with mathematics.</li> <li>• Use appropriate tools strategically.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> <li>• Look for and express regularity in repeated reasoning.</li> </ul>							
<b><u>21<sup>st</sup> Century Themes</u></b>							
	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
<b><u>21<sup>st</sup> Century Skills</u></b>							
	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Take lessons from topic 6 to create new unit: <b>Multiplication</b>		<b>Unit #:6</b>
<b>Facts: Use Know Facts</b>		
<b>Course or Grade Level: 3<sup>rd</sup> Grade Math</b>		<b>Length of Time: 2 weeks</b>
<b>Date Created: January 13, 2012</b>		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Supplemental lesson 6.1A; Lessons 6.1; 6.2; & 6.3 Week #2: Lessons 6.4; & 6.6 Week #3: Supplemental lesson 6.7A; & 6.7; Review & Topic Test 2013-2014 Dates: Nov. 18 through December 6  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How can you break apart arrays to multiply by 3?</li> <li>• How can you break apart arrays to multiply with 4?</li> <li>• How can you break apart arrays to multiply with 6 or 7?</li> <li>• How can you break apart arrays and use known facts to multiply with 8?</li> <li>• How can you multiply three numbers?</li> <li>• How can you figure out what question needs to be answered first in a multiple-step problem.?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• The Distributive Property (supplemental lesson 6.1A)</li> <li>• 3 as a Factor (lesson 6.1)</li> <li>• 4 as a Factor (lesson 6.2)</li> <li>• 6 and 7 as Factors (lesson 6.3)</li> <li>• 8 as a Factor (lesson 6.4)</li> <li>• Multiplying with 3 Factors (lesson 6.6)</li> <li>• Multiplying to find Combinations (supplemental lesson 6.7A)</li> <li>• Problem Solving: Multiple-Step Problems (lesson 6.7)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Use the Distributive Property to simplify multiplication problems by breaking apart large arrays that represent multiplication facts into smaller arrays that represent other multiplication facts</li> <li>• Use known facts to find products with 3 as a factor.</li> <li>• Use known facts and doubles to find products with 4 as a factor.</li> <li>• Use known facts to find products with 6 and 7 as factors.</li> <li>• Use known facts and doubles to find products with 8 as a factor.</li> <li>• Use patterns to multiply with 11 and 12 as factors.</li> <li>• Multiply three numbers and use the Associative Property of Multiplication.</li> <li>• Solve multiple-step problems.</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	

<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucces.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> <li>• Teacher Text</li> <li>• Manipulatives (Place Value Blocks)</li> </ul>
<b>Common Core State Standards</b>	
<b>Grade or Conceptual Category (HS only): Third</b>	
<b>Domain (name and #): Operations and Algebraic Thinking 3.OA</b>	
<p><b>Cluster: Represent and solve problems involving multiplication and division.</b></p> <p><b>Cluster: Understand properties of multiplication and the relationship between multiplication and division</b></p> <p><b>Cluster: Solve problems involving the four operations, and identify and explain patterns in arithmetic</b></p>	<p><b>Standard 3.OA.3 :Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</b></p> <p><b>Standard 3.OA.5 Apply properties of operations as strategies to multiply and divide</b></p> <p><b>3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</b></p>
<p><b>Cluster:Geometric measurement: understand concepts of area and relate area to multiplication and to addition</b></p>	<p><b>3.MD.7c Relate area to the operations of multiplication and addition</b>  <b>Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths <math>a</math> and <math>b + c</math> is the sum of <math>a \times b</math> and <math>a \times c</math>. Use area models to represent the distributive property in mathematical reasoning.</b></p>
<p><b>Cluster: Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures</b></p>	<p><b>3.MD.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters</b></p>
<p><b>Math Practices:</b></p> <ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Model with mathematics.</li> <li>• Use appropriate tools strategically.</li> <li>• Attend to precision.</li> </ul>	

- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

**21<sup>st</sup> Century Themes**

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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**21<sup>st</sup> Century Skills**

	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b>	Take lessons from topic 7 to create new unit: <b>Meanings of</b>	<b>Unit #: 7</b>
<b>Division</b>		
<b>Course or Grade Level: 3<sup>rd</sup> Grade Math</b>	<b>Length of Time: 1 week, 3 days</b>	
<b>Date Created: January 13, 2012</b>	<b>BOE Approval Date:</b>	
<b>Pacing</b>	Week #1: Lessons 7.1; supplemental lesson 7.2A; Lesson 7.3; supplemental lesson 7.4A & 7.4 Week #2: Lesson 7.5: Review and Topic Test 2013-2014 Dates: Dec. 9 through Dec. 20  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How can you think of division as sharing?</li> <li>• How can you use a multiplication table to find an answer to a division fact?</li> <li>• How can you think of division as repeated subtraction?</li> <li>• How can you write an equation to represent the relationships in a word problem?</li> <li>• What kinds of stories involve division situations?</li> <li>• How can you use objects and draw a picture to solve a problem?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Division as Sharing (lesson 7.1)</li> <li>• Finding Missing Numbers in a Multiplication Table (supplemental lesson 7.2A)</li> <li>• Division as Repeated Subtraction (lesson 7.3)</li> <li>• Problem Solving: Choose an Appropriate Equation (supplemental lesson 7.4A)</li> <li>• Writing Division Stories (lesson 7.4)</li> <li>• Problem Solving: Use Objects and Draw a Picture (lesson 7.5)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Use models to solve division problems involving sharing and record solutions using division number sentences.</li> <li>• Use multiplication tables to find answers to division problems</li> <li>• Use models to solve division problems involving repeated subtraction and record solutions using division number sentences.</li> <li>• Solve word problems by writing equations that represent the problem situations</li> <li>• Write and solve number stories involving division.</li> <li>• Solve problems by using objects and drawing a picture.</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucces.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> </ul>	





			Literacy				
<u>21<sup>st</sup> Century Skills</u>							
	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Division Facts (Lessons from topic 8)		<b>Unit #: 8</b>
<b>Course or Grade Level:</b> 3 <sup>rd</sup> Grade Math		<b>Length of Time:</b> 2 weeks, 1 day
<b>Date Created:</b> January 13, 2012		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Lessons 8.1 & 8.2 Week #2: Lessons 8.3; 8.4, supplemental lesson 8.5A, 8.5, & 8.6 Week # 3: Review & Topic Test 2013-2014 Dates: Jan. 2 through Jan. 14  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How are multiplication and division facts related?</li> <li>• How can you use multiplication to help you divide?</li> <li>• How can you use multiplication to help you divide by 6 and 7?</li> <li>• How can you use multiplication to help you divide by 8 and 9?</li> <li>• What happens when you divide with 0 and 1?</li> <li>• How can you solve problems by drawing a picture and writing a number sentence.</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Relating Multiplication and Division (lesson 8.1)</li> <li>• Fact Families with 2, 3, 4, and 5. (lesson 8.2)</li> <li>• Fact Families with 6, and 7. (lesson 8.3)</li> <li>• Fact Families with 8 and 9. (lesson 8.4)</li> <li>• Making Sense of Multiplication and Division Equations (supplemental lesson 8.5A)</li> <li>• Dividing with 0 and 1 (lesson 8.5)</li> <li>• Problem Solving: Draw a Picture and Write a Number Sentence (lesson 8.6)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Give a multiplication fact, state a related division fact and vice versa.</li> <li>• Give quotients for division facts with divisors of 2, 3, 4, or 5.</li> <li>• Give quotients for division facts with divisors of 6 and 7.</li> <li>• Give quotients for division facts with divisors of 8 and 9.</li> <li>• Use multiplication and division facts to decide whether both sides of an equation are equal and determine the value of an unknown number in an equation</li> <li>• Use patterns and fact families to find answers to division facts with 0 and 1.</li> <li>• Solve division problems involving sharing and repeated subtraction by drawing a picture and writing a number sentence.</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	

<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucces.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> <li>• Teacher Text</li> <li>• Manipulatives (Place Value Blocks)</li> </ul>
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**Common Core State Standards**

**Grade or Conceptual Category (HS only): Third**

**Domain (name and #): Operations and Algebraic Thinking 3.OA**

**Cluster: Represent and solve problems involving multiplication and division.**

**3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.**

**3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations  $8 \times ? = 48$ ,  $5 = \square \div 3$ ,  $6 \times 6 = ?$**

**Multiply and divide within 100**

**3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g. knowing that  $8 \times 5 = 40$ , one know  $40 \div 5 = 8$ ) or properties of operations. By the end of grade 3, know from memory all products of two one-digit numbers.**

**Math Practices:**

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

**21<sup>st</sup> Century Themes**

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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**21<sup>st</sup> Century Skills**

Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Understanding Fractions (lessons from topic 12)		<b>Unit #: 9</b>
<b>Course or Grade Level:</b> 3 <sup>rd</sup> Grade Math		<b>Length of Time:</b> 1 weeks 4 days
<b>Date Created:</b> January 13, 2012		<b>BOE Approval Date:</b>
<b>Pacing</b>	<p>Week #1: Lessons 12.1, supplemental lesson 12.2A, &amp; 12.3            Week #2: Lessons 12.4, 12.7, 9.7(Common Core), 12.10            Week # 3: Review &amp; Topic Test            2013-2014 Dates: Jan. 15 through Jan. 28</p> <p><b>Daily Warm-up: Windows/Test Prep:</b> Please make sure to include concepts from lessons 14.2 <i>Fractions of an Inch</i></p>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How can you divide a region into equal parts?</li> <li>• How can you write a fraction to name part of a whole?</li> <li>• How can you write a fraction to name part of a set?</li> <li>• How do you estimate parts?</li> <li>• How can you locate fractions on a number line?</li> <li>• How can you write a fraction to name part of a length?</li> <li>• How can you use a pattern in a table to help you solve a problem?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Dividing Regions into Equal Parts (lesson 12.1)</li> <li>• Fractions and Regions (supplemental lesson 12.2A: <b>replaces 12.2</b>)</li> <li>• Fractions and Sets (lesson 12.3)</li> <li>• Benchmark Fractions (lesson 12.4)</li> <li>• Fractions on a Number Line (lesson 12.7)</li> <li>• Fractions and Length (lesson 9.7 from online Common Core Edition)</li> <li>• Problem Solving: Make a Table and Look for a Pattern (lesson 12.10)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Identify regions that have been divided into equal-sized parts and divide regions into equal-sized parts</li> <li>• Associate the model, symbol, and words used to describe a fractional part of a whole region</li> <li>• Associate the model, symbol, and words used to describe a fractional part of a set</li> <li>• Use benchmark fractions to estimate fractional parts</li> <li>• Find and write fractions and mixed numbers on a number line and compare and order fractions and mixed numbers</li> <li>• Associate the model, symbol, and words used to describe a fractional part of the length of an object</li> <li>• Make a table and look for a pattern to solve a problem</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	

<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucces.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> <li>• Teacher Text</li> <li>• Manipulatives (Place Value Blocks)</li> </ul>
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**Common Core State Standards**

**Grade or Conceptual Category (HS only): Third**

**Domain (name and #): 3.NF Number and Operations-Fractions**

<b>Cluster: Develop understanding of fractions as numbers</b>	<b>3.NF.1 Understand a fraction <math>1/b</math> as the quantity formed by 1 part when a whole is partitioned in <math>b</math> equal parts: understand a fraction <math>a/b</math> as the quantity formed by <math>a</math> parts of size <math>1/b</math></b>
	<b>3.NF.2 Understand a fraction as a number on the number line: represent fractions on a number line diagram.</b> <p style="margin-left: 20px;"><b>a. Represent a fraction <math>1/b</math> on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into <math>b</math> equal parts. Recognize that each part has size <math>1/b</math> and that the endpoint of the part based at 0 locates the number <math>1/b</math> on the number line.</b></p> <p style="margin-left: 20px;"><b>b. Represent a fraction <math>a/b</math> on a number line diagram by marking off a lengths <math>1/b</math> from 0. Recognize that the resulting interval has size <math>a/b</math> and that its endpoint locates the number <math>a/b</math> on the number line</b></p>

**Domain (name and #): 3.OA Operations and Algebraic Thinking**

<b>Cluster: Represent and solve problems involving multiplication and division</b>	<b>3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</b>
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**Math Practices:**

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

**21<sup>st</sup> Century Themes**

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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**21<sup>st</sup> Century Skills**

Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Use lessons from topic 12 to create new unit of <b>Fraction Comparison and Equivalence</b>		<b>Unit #: 10</b>
<b>Course or Grade Level:</b> 3 <sup>rd</sup> Grade Math		<b>Length of Time:</b> 2 weeks, 2 days
<b>Date Created:</b> January 13, 2012		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Lessons 10.1(Common Core), supplemental lessons 12.7A & 12.5A Week #2: Supplemental lesson12.7B; Lessons 12.5, supplemental lesson 12.8A, supplemental lesson 12.8B, Lesson 12.8 Week # 3: Lesson 12.9; Review & Topic Test 2013-2014 Dates: Jan. 29 through Feb. 12  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How can you compare fractions that have the same denominator?</li> <li>• How can you compare fractions that have the same numerator?</li> <li>• How can benchmark numbers be used to compare fractions?</li> <li>• How can you compare fractions on a number line?</li> <li>• How can different fractions name the same number?</li> <li>• What do equivalent fractions look like on the number line?</li> <li>• How can whole numbers be described using fraction names?</li> <li>• How can you use fraction strips to add or subtract fractions?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Using Models to Compare Fractions: Same Denominator (lesson 10.1 from online Common Core Edition)</li> <li>• Using Models to Compare Fractions: Same Numerator (supplemental lesson 12.7A)</li> <li>• Comparing Fractions Using Benchmarks (supplemental lesson 12.5A)</li> <li>• Comparing Fractions on a Number Line (supplemental lesson 12.7B)</li> <li>• Finding Equivalent Fractions (lesson 12.5)</li> <li>• Equivalent Fractions and the Number Line (supplemental lesson 12.8A)</li> <li>• Whole Numbers and Fractions (supplemental lesson 12.8B)</li> <li>• Using Models to Add Fractions (lesson 12.8)</li> <li>• Using Models to Subtract Fractions (lesson 12.9)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Use models and quantitative reason to compare fractions with the same denominator</li> <li>• Use models and quantitative reason to compare fractions with the same numerator</li> <li>• Use benchmark numbers to compare fractions with the same numerator or denominator</li> <li>• Use number lines to compare fractions with like denominators or like numerators</li> <li>• Use models to find equivalent fractions</li> <li>• Use number lines to identify equivalent fractions</li> <li>• Use fractions strips and number lines to find fraction names for whole numbers</li> <li>• Add or subtract fractions with like denominators , using models</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	

<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucccess.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> <li>• Teacher Text</li> <li>• Manipulatives (Place Value Blocks)</li> </ul>
<b>Common Core State Standards</b>	
<b>Grade or Conceptual Category (HS only): Third</b>	
<b>Domain (name and #): 3.NF Number and Operations-Fractions</b>	
<b>Cluster: Develop understanding of fractions as numbers</b>	<p><b>3.NF.1 Understand a fraction <math>1/b</math> as the quantity formed by 1 part when a whole is partitioned in <math>b</math> equal parts: understand a fraction <math>a/b</math> as the quantity formed by <math>a</math> parts of size <math>1/b</math></b></p> <p><b>3.NF.2 Understand a fraction as a number on the number line: represent fractions on a number line diagram.</b></p> <p><b>a. Represent a fraction <math>1/b</math> on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into <math>b</math> equal parts. Recognize that each part has size <math>1/b</math> and that the endpoint of the part based at 0 locates the number <math>1/b</math> on the number line.</b></p> <p><b>b. Represent a fraction <math>a/b</math> on a number line diagram by marking off a lengths <math>1/b</math> from 0. Recognize that the resulting interval has size <math>a/b</math> and that its endpoint locates the number <math>a/b</math> on the number line</b></p> <p><b>3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size</b></p> <p><b>a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line</b></p> <p><b>b. Recognize and generate simple equivalent fractions, e.g. <math>1/2 = 2/4</math>, <math>4/6 = 2/3</math>. Explain why the fractions are equivalent, e.g., by using a visual fraction model.</b></p> <p><b>c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. <i>Examples: Express 3 in the form of <math>3 = 3/1</math>; recognize that <math>6/1 = 6</math>; locate <math>4/4</math> and 1 at the same point of a number line diagram.</i></b></p> <p><b>d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual fraction model</b></p>
<b>Math Practices:</b> <ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Model with mathematics.</li> <li>• Use appropriate tools strategically.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> <li>• Look for and express regularity in repeated reasoning.</li> </ul>	
<b><u><a href="#">21<sup>st</sup> Century Themes</a></u></b>	

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
<u><b>21<sup>st</sup> Century Skills</b></u>							
	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills		



**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Use lessons from topic 10 to create a new unit of <b>Two-Dimensional Shapes and Their Attributes</b>		<b>Unit #: 11</b>
<b>Course or Grade Level:</b> 3 <sup>rd</sup> Grade Math		<b>Length of Time:</b> 2 weeks
<b>Date Created:</b> January 13, 2012		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Lesson 10.3 Week #2: Lessons 10.4; 10.5, 10.6, 10.7 Week # 3: supplemental lessons 10.8A & 10.8B, 10.8, Review and Topic Test 2013-2014 Dates: Feb. 13 through Feb. 28  <b>Daily Warm-up: Windows/Test Prep:</b> Please make sure to include concepts from lessons 11.1 <i>Congruent Figures in Motion</i> , 11.2 <i>Line Symmetry</i> , 11.3 <i>Drawing Shapes with Lines of Symmetry</i>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• What is important to know about lines?</li> <li>• How do you describe angles?</li> <li>• What is a polygon?</li> <li>• How can you describe triangles?</li> <li>• How can you describe quadrilaterals?</li> <li>• What polygons can you put together or take apart to make other polygons?</li> <li>• What generalization can be made from a group of examples?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Lines and Line Segment (lesson 10.3)</li> <li>• Angles (lesson 10.4)</li> <li>• Polygons (lesson 10.5)</li> <li>• Triangles (lesson 10.6)</li> <li>• Quadrilaterals (lesson 10.7)</li> <li>• Combining and Separating Shapes (supplemental lesson 10.8A)</li> <li>• Making New Shapes (supplemental lesson 10.8B)</li> <li>• Problem Solving: Make and Test Generalizations (lesson 10.8)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Identify lines and line segments and explore their different relationships</li> <li>• Identify and classify angles in relation to right angles</li> <li>• Identify and classify polygons</li> <li>• Identify and classify triangles</li> <li>• Identify and classify quadrilaterals</li> <li>• Create new shapes by combining shapes or by separating shapes</li> <li>• Make a new shape by cutting apart a shape and rearranging the pieces</li> <li>• Identify commonalities among objects or situations to make and test generalizations</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	

<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>					
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucces.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> <li>• Teacher Text</li> <li>• Manipulatives (Place Value Blocks)</li> </ul>					
<b>Common Core State Standards</b>						
<b>Grade or Conceptual Category (HS only): Third</b>						
<b>Domain (name and #): 3.G Geometry</b>						
<b>Cluster: Reason with shapes and their attributes</b>	<b>3.G.1 Understand that shapes in different categories (e.g. rhombuses, rectangles, and others) may share attributes (e.g. having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.</b>					
	<b>3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as <math>\frac{1}{4}</math> of the area of the shape.</b>					
<b>Math Practices:</b>						
<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Model with mathematics.</li> <li>• Use appropriate tools strategically.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> <li>• Look for and express regularity in repeated reasoning.</li> </ul>						
<b><u>21<sup>st</sup> Century Themes</u></b>						
	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy	Health Literacy
<b><u>21<sup>st</sup> Century Skills</u></b>						
	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration	Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills	

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Use lessons from topic 17 to create unit: <b>Time</b>		<b>Unit #: 12</b>
<b>Course or Grade Level: 3<sup>rd</sup> Grade Math</b>		<b>Length of Time: 1 week, 2 days</b>
<b>Date Created: January 13, 2012</b>		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Lessons 17.1, 17.2, 17.3, 17.4, 17.6 Week #2: Review & Topic Test 2013-2014 Dates: Mar. 3 through Mar. 11  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How do you tell time to the nearest quarter hour or half hour?</li> <li>• How do you tell time to the nearest minute?</li> <li>• How can you change units of time?</li> <li>• How can you find elapsed time?</li> <li>• How can you work backward to solve a problem?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Time to the Half Hour and Quarter Hour (lesson 17.1)</li> <li>• Time to the Minute (lesson 17.2)</li> <li>• Units of Time (lesson 17.3)</li> <li>• Elapsed Time (lesson 17.4)</li> <li>• Problem Solving: Work Backward (lesson 17.6)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Tell time to the nearest half hour and quarter hour using analog and digital clocks, and identify times as AM or PM</li> <li>• Tell time to the nearest minute using analog and digital clocks</li> <li>• Perform simple conversions for units of time</li> <li>• Find elapsed time in interval of minutes</li> <li>• Use the strategy work backward to solve problems</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsuccess.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> <li>• Teacher Text</li> <li>• Manipulatives (Place Value Blocks)</li> </ul>	
<b>Common Core State Standards</b>		
<b>Grade or Conceptual Category (HS only): Third</b>		

<b>Domain (name and #): 3.MD Measurement and Data</b>						
<b>Cluster: Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects</b>		<b>3.MD.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g. by representing the problem on a number line diagram</b>				
<b>Math Practices:</b>						
<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Model with mathematics.</li> <li>• Use appropriate tools strategically.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> <li>• Look for and express regularity in repeated reasoning.</li> </ul>						
<b><u>21<sup>st</sup> Century Themes</u></b>						
	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy	Health Literacy
<b><u>21<sup>st</sup> Century Skills</u></b>						
	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration	Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills	

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Use lessons from topic 16 to create unit: <b>Perimeter</b>		<b>Unit #: 13</b>
<b>Course or Grade Level: 3<sup>rd</sup> Grade Math</b>		<b>Length of Time: 1 week, 3 days</b>
<b>Date Created: January 13, 2012</b>		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Lessons 16.1, supplemental lesson 16.2A, Lesson 16.2 Week #2: Lessons 16.3, 16.4, Review, and Topic Test 2013-2014 Dates: Mar. 12 through Mar. 20  <b>Daily Warm-up: Windows/Test Prep:</b> Please make sure to include concepts from lessons 14.2 <i>Fractions of an Inch</i> , 14.3 <i>Using Inches, Feet, Yards, and Miles</i> , 15.1 <i>Using Centimeters and Decimeters</i> , and 15.2 <i>Using Meters and Kilometers</i>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How do you find the perimeter of a shape?</li> <li>• How can you use tools and units to find perimeter?</li> <li>• How can you find the perimeter of common shapes?</li> <li>• What shapes can you make when you know the perimeter?</li> <li>• How can you use the strategy Try, Check, and Revise to solve problems?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Understanding Perimeter (lesson 16.1)</li> <li>• Tools and Units for Perimeter (supplemental lesson 16.2A)</li> <li>• Perimeter of Common Shapes (lesson 16.2)</li> <li>• Different Shapes with the Same Perimeter (lesson 16.3)</li> <li>• Problem Solving: Try, Check, and Revise (lesson 16.4)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Use standard units to find the perimeter of a shape</li> <li>• Select appropriate tools and units to find perimeter</li> <li>• Use standard units to find perimeter of a shape</li> <li>• Match shapes to a given perimeter and learn that different shapes can have the same perimeter</li> <li>• Solve a problem through the process of try, check, and revise</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucces.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> <li>• Teacher Text</li> <li>• Manipulatives (Place Value Blocks)</li> </ul>	
<b>Common Core State Standards</b>		
<b>Grade or Conceptual Category (HS only): Third</b>		

<b>Domain (name and #): 3.MD Measurement and Data</b>						
<b>Cluster: Geometric measurement; recognize perimeter as an attribute of plane figures and distinguish between linear and area measures</b>		<b>3.MD.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters</b>				
<b>Math Practices:</b>						
<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Model with mathematics.</li> <li>• Use appropriate tools strategically.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> <li>• Look for and express regularity in repeated reasoning.</li> </ul>						
<b><u>21<sup>st</sup> Century Themes</u></b>						
	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy	Health Literacy
<b><u>21<sup>st</sup> Century Skills</u></b>						
	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration	Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills	

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Use lessons from topic 16 to create unit: <b>Area</b>		<b>Unit #: 14</b>
<b>Course or Grade Level:</b> 3 <sup>rd</sup> Grade Math		<b>Length of Time:</b> 2 weeks, 1 day
<b>Date Created:</b> January 13, 2012		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Supplemental lesson 16.6A Week #2: Supplemental lesson 16.6B, lesson 16.6, supplemental lessons 16.7A, 16.7B, 16.7C Week #3: Supplemental lesson 16.7D, lesson 16.8, Review & Topic Test 2013-2014 Dates: Mar. 21 through Apr. 3  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How can you measure area?</li> <li>• What types of units describe area?</li> <li>• How do you estimate to find the area of an irregular shape?</li> <li>• How do you measure the amount of space a figure covers?</li> <li>• How can you break apart rectangles to represent the Distributive Property?</li> <li>• How can you find the area of an irregular shape?</li> <li>• How can you use equal areas to measure unit fractions?</li> <li>• How can you use simpler problems to solve a problem?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Covering Regions (supplemental lesson 16.6A)</li> <li>• Area and Units (supplemental lesson 16.6B)</li> <li>• Estimating and Measuring Area (supplemental lesson 16.6)</li> <li>• Area of Squares and Rectangles (supplemental lesson 16.7A)</li> <li>• Area and the Distributive Property (supplemental lesson 16.7B)</li> <li>• Area of Irregular Shapes (supplemental lesson 16.7C)</li> <li>• Equal Areas and Fractions (supplemental lesson 16.7D)</li> <li>• Problem Solving: Solve a Simpler Problems (lesson 16.8)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Measure the area of a shape by counting the number of square units that cover a region</li> <li>• Use square units to make figures with given areas</li> <li>• Estimate and find the area of irregular shapes drawn on a grid or with square units shown</li> <li>• Find the area of rectangles by counting square units or by using a formula</li> <li>• Use the areas of rectangles to model the Distributive Property</li> <li>• Find the area of irregular shapes</li> <li>• Use equal areas of parts of figures to model unit fractions</li> <li>• Solve complex problems asking for the area of irregular shapes</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	





	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Use lessons from topics 14 & 15 to create unit: <b>Liquid Volume and Mass</b>		<b>Unit #: 15</b>
<b>Course or Grade Level:</b> 3 <sup>rd</sup> Grade Math		<b>Length of Time:</b> 1 week, 2 days
<b>Date Created:</b> January 13, 2012		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Lessons 14.4 Week #2: Lessons 15.3; 15.4; 14.5 and supplemental lesson 15.5A; Review Week #3: Topic Test 2013-2014 Dates: Apr. 4 through Apr. 15  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• What customary units describe how much a container holds?</li> <li>• What metric units describe how much a container holds?</li> <li>• What metric units describe mass?</li> <li>• What customary units describe how heavy something is?</li> <li>• How can you solve a problem by drawing a picture?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Customary Units of Capacity (lesson 14.4)</li> <li>• Metric Units of Capacity (lesson 15.3)</li> <li>• Units of Mass (lesson 15.4)</li> <li>• Units of Weight (lesson 14.5)</li> <li>• Problem Solving: Draw a Picture (supplemental lesson 15.5A)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Choose an appropriate unit and tool, estimate, and measure in cups, pints, quarts, and gallons and identify objects which hold about a cup, a pint, a quart, or a gallon</li> <li>• Choose an appropriate unit and tool, estimate, and measure in milliliters and liters and identify objects which hold about a liter or a milliliter</li> <li>• Choose an appropriate unit and tool, estimate, and measure in grams and kilograms and identify objects with a mass of about one gram or one kilogram</li> <li>• Choose an appropriate unit and tool, estimate, and measure in ounces, pounds, and tons and identify objects that way about an ounce, a pound, or a ton</li> <li>• Draw a picture to solve a problem involving units of capacity and mass</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsuccess.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> </ul>	

	<ul style="list-style-type: none"> <li>• Workbook</li> <li>• Teacher Text</li> <li>• Manipulatives (Place Value Blocks)</li> </ul>
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**Common Core State Standards**

**Grade or Conceptual Category (HS only): Third**

**Domain (name and #): Measurement and Data 3.MD**

<b>Cluster: Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.</b>	<b>3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).6 Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.</b>
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- Math Practices:**
- Make sense of problems and persevere in solving them.
  - Reason abstractly and quantitatively.
  - Construct viable arguments and critique the reasoning of others.
  - Model with mathematics.
  - Use appropriate tools strategically.
  - Attend to precision.
  - Look for and make use of structure.
  - Look for and express regularity in repeated reasoning.

**21<sup>st</sup> Century Themes**

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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**21<sup>st</sup> Century Skills**

	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Use lessons from topic 20 to create unit: <b>Data</b>		<b>Unit #: 16</b>
<b>Course or Grade Level: 3<sup>rd</sup> Grade Math</b>		<b>Length of Time: 3 weeks</b>
<b>Date Created: January 13, 2012</b>		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Lessons 20.8, supplemental lesson 20.9A Week #2: Lessons 20.2; 20.3, 20.4, 20.9, Review Week #3: Review & Topic Test; NJ ASK Test Prep 2013-2014 Dates: Apr. 16 through May 9 <b>NJ ASK Testing: May 12 through May 15</b>  <b>Daily Warm-up: Windows/Test Prep:</b> Please make sure to include concepts from lessons 20.5 <i>Ordered Pairs and Line Graphs</i> , 20.6 <i>How Likely?</i> & 20.7 <i>Outcomes and Experiments</i>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How do you make and use line plots?</li> <li>• How can you make line plots to organize and represent data you have collected?</li> <li>• How can you read graphs?</li> <li>• How do you determine how much a symbol in a pictograph represents?</li> <li>• How can you choose a scale to make a bar graph?</li> <li>• What conclusions can you draw from tables and graphs?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Line Plots and Probability (lesson 20.8)</li> <li>• Length and Line Plots (supplemental lesson 20.9A)</li> <li>• Reading Pictographs and Bar Graphs (lesson 20.2)</li> <li>• Making Pictographs (lesson 20.3)</li> <li>• Making Bar Graphs (lesson 20.4)</li> <li>• Problem Solving: Use Tables and Graphs to Draw Conclusions (lesson 20.9)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Use a line plot to organize the results of a probability experiment and predict future events</li> <li>• Generate data by measuring lengths to the nearest fourth of an inch and make line plots to organize their data and draw conclusions</li> <li>• Read and interpret data from a pictograph or bar graph</li> <li>• Make a pictograph from a table or tally chart</li> <li>• Make a bar graph to represent the data in a table or tally chart</li> <li>• Solve problems by using tables and graphs to draw conclusions</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucces.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> </ul>	

	<ul style="list-style-type: none"> <li>• Teacher Text</li> <li>• Manipulatives (Place Value Blocks)</li> </ul>
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**Common Core State Standards**

**Grade or Conceptual Category (HS only): Third**

**Domain (name and #): 3.MD Measurement and Data**

<b>Cluster: Represent and interpret data</b>	<b>3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two- step “how many more” and “ how many less” problems using information presented in scaled bar graphs. <i>For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i></b>
	<b>3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units- whole numbers, halves, or quarters.</b>

- Math Practices:**
- Make sense of problems and persevere in solving them.
  - Reason abstractly and quantitatively.
  - Construct viable arguments and critique the reasoning of others.
  - Model with mathematics.
  - Use appropriate tools strategically.
  - Attend to precision.
  - Look for and make use of structure.
  - Look for and express regularity in repeated reasoning.

**21<sup>st</sup> Century Themes**

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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**21<sup>st</sup> Century Skills**

	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Multiplying Greater Numbers (Topic 18)		<b>Unit #: 17</b>
<b>Course or Grade Level:</b> 3 <sup>rd</sup> Grade Math		<b>Length of Time:</b> 1 week, 4 days
<b>Date Created:</b> January 13, 2012		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Lessons 18.1, 18.2, 18.3, 18.4 & 18.5 Week #2: Lessons 18.6 & 18.7 , Review & Test 2013-2014 Dates: May 19 through May 30  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How can you use mental math to multiply by multiples of 10, 100, and 1,000?</li> <li>• How can you estimate a product by rounding?</li> <li>• How can you use arrays to help multiply with a 2-digit number?</li> <li>• How can you break apart arrays to help you multiply with greater numbers?</li> <li>• How can you use partial products to find the total product?</li> <li>• How do you regroup to multiply?</li> <li>• How can a picture help you know what number sentence will help you solve a problem?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Using Mental Math to Multiply (lesson 18.1)</li> <li>• Estimating Products (lesson 18.2)</li> <li>• Multiplication and Arrays (lesson 18.3)</li> <li>• Breaking Apart to Multiply (lesson 18.4)</li> <li>• Using an Expanded Algorithm (lesson 18.5)</li> <li>• Multiplying 2- and 3-Digit by 1-Digit Numbers (lesson 18.6)</li> <li>• Problem Solving: Draw a Picture and Write a Number Sentence (lesson 18.7)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Use mental math to multiply by multiples of 10, 100, and 1,000.</li> <li>• Estimate products of 1-digit and 2-digit numbers by using rounding.</li> <li>• Use an array to multiply 1-digit and 2-digit numbers.</li> <li>• Use an array and breaking apart to multiply 1-digit times 2-digit numbers.</li> <li>• Use breaking Apart and the expanded algorithm to multiply a 1-digit times a 2-digit number.</li> <li>• Multiply a 1-digit times a 2-digit or 3-digit number with regrouping.</li> <li>• Solve word problems by drawing a picture and writing a number sentence.</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>• Pearsonsucccess.net</li> <li>• E-tools</li> <li>• Smartboard</li> <li>• Student Text</li> <li>• Workbook</li> </ul>	

	<ul style="list-style-type: none"> <li>• Teacher Text</li> <li>• Manipulatives (Place Value Blocks)</li> </ul>
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**Common Core State Standards**

**Grade or Conceptual Category (HS only): Third**

**Domain (name and #): 3.OA Operations and Algebraic Thinking**

<p><b>Cluster: Represent and solve problems involving multiplication and division</b></p> <p><b>Understand properties of multiplication and the relationship between multiplication and division</b></p> <p><b>Multiply and divide within 100</b></p>	<p><b>3.OA.1 Interpret products of whole numbers, e.g. interpret <math>5 \times 7</math> as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as <math>5 \times 7</math></b></p> <p><b>3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g. by using drawings and equations with a symbol for the unknown number to represent the problem.</b></p> <p><b>3.OA.5 Apply properties of operations as strategies to multiply and divide</b></p> <p><b>3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division. By the end of Grade 3, know from memory all products of two one-digit numbers.</b></p>
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**Domain (name and #): 3.NBT Number and Operations in Base Ten**

<p><b>Cluster: Use place value understanding an properties of operations to perform multi-digit arithmetic</b></p>	<p><b>3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g. <math>9 \times 80</math> , <math>5 \times 60</math>) using strategies based on place value and properties of operations</b></p>
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- Math Practices:**
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  - Reason abstractly and quantitatively.
  - Construct viable arguments and critique the reasoning of others.
  - Model with mathematics.
  - Use appropriate tools strategically.
  - Attend to precision.
  - Look for and make use of structure.
  - Look for and express regularity in repeated reasoning.

**21<sup>st</sup> Century Themes**

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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**21<sup>st</sup> Century Skills**

Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
Media Literacy		ICT Literacy	X	Life and Career Skills		

**Pine Hill Public Schools  
Mathematics Curriculum**

<b>Unit Title:</b> Dividing with 1-Digit Numbers (Topic 19)		<b>Unit #: 18</b>
<b>Course or Grade Level:</b> 3 <sup>rd</sup> Grade Math		<b>Length of Time:</b> 2 weeks
<b>Date Created:</b> January 13, 2012		<b>BOE Approval Date:</b>
<b>Pacing</b>	Week #1: Lessons 19.1, 19.2, 19.3, 19.4, & 19.5 Week #2: Lesson 19.6, End-of-Year Test 2013-2014 Dates: June 2 through June 13  <b>Daily Warm-up: Windows/Test Prep</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>• How can you divide multiples of 10 and 100 easily?</li> <li>• How do you estimate with division?</li> <li>• How can you model division with greater numbers?</li> <li>• How do you divide with paper and pencil?</li> <li>• What happens when some are left?</li> <li>• How can you solve problems that require more than one step?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>• Mental Math (lesson 19.1)</li> <li>• Quotients: Estimated (lesson 19.2)</li> <li>• Models and Symbols (lesson 19.3)</li> <li>• 2-Digit Number Division (lesson 19.4)</li> <li>• Division with Remainders (lesson 19.5)</li> <li>• Problem Solving: Multiple Step Problems (lesson 19.6)</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Use known multiplication patterns to divide multiples of 10, 100, and 1,000 by a 1-digit number.</li> <li>• Use compatible numbers to estimate quotients.</li> <li>• Use place value blocks and an algorithm to divide 2-digit numbers by 1-digit numbers.</li> <li>• Divide 2-digit numbers by 1-digit numbers using paper and pencil.</li> <li>• Use arrays and the division algorithm to divide numbers with a remainder.</li> <li>• Use previously learned skills to solve multiple-step problems</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <li>• Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving.</li> <li>• Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <li>• Error Intervention</li> <li>• Differentiated Instruction- Intervention, On-Level, and Advanced</li> <li>• Leveled Homework-Reteach, and Practice</li> <li>• Center Activities</li> <li>• Special Needs</li> <li>• Below Level</li> <li>• ELL Strategies</li> </ul>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	
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<b>Common Core State Standards</b>		



<b>Grade or Conceptual Category (HS only):</b>						
<b>Domain (name and #): Operations and Algebraic Thinking 3.OA</b>						
<b>Cluster: Represent and solve problems involving multiplication and division</b>  <b>Understand properties of multiplication and the relationship between multiplication and division</b>  <b>Multiply and divide within 100</b>  <b>Solve problems involving the four operations, and identify and explain patterns in arithmetic</b>		<b>3.OA.2 Interpret whole-number quotients of whole numbers, e.g., interpret <math>56 \div 8</math> as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as <math>56 \div 8</math>.</b> <b>3.OA.6 Understand division as an unknown-factor problem. For example, find <math>32 \div 8</math> by finding the number that makes 32 when multiplied by 8. Solve problems involving the four operations, and identify and explain patterns in arithmetic.</b>  <b>3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that <math>8 \times 5 = 40</math>, one knows <math>40 \div 5 = 8</math>) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.</b>  <b>3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. Multiply and divide within 100.</b>				
<b>Math Practices:</b>						
<ul style="list-style-type: none"> <li>• Make sense of problems and persevere in solving them.</li> <li>• Reason abstractly and quantitatively.</li> <li>• Construct viable arguments and critique the reasoning of others.</li> <li>• Model with mathematics.</li> <li>• Use appropriate tools strategically.</li> <li>• Attend to precision.</li> <li>• Look for and make use of structure.</li> <li>• Look for and express regularity in repeated reasoning.</li> </ul>						
<b><u>21<sup>st</sup> Century Themes</u></b>						
	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy	Health Literacy
<b><u>21<sup>st</sup> Century Skills</u></b>						
	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration	Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills	



