	Р	ine Hill Public Sc	hools Cui	rriculum
Content Area: Mathematics		Mathematics		
Course Title	e/ Grade Level:	Grade 3		
Unit 1:	Understand Multip of Whole Numbers	lication and Division	Duration:	8 days
Unit 2:	Multiplication Fac	cts: Use Patterns	<b>Duration:</b>	8 days
Unit 3:	Apply Properties: I for 3, 4, 6, 7, 8	Multiplication Facts	Duration:	10 days
Unit 4:	Use Multiplication Facts	to Divide: Division	Duration:	11 days
Unit 5:	Fluently Multiply a	and Divide within 100	<b>Duration:</b>	10 days
Unit 6:	Connect Area to M Division	ultiplication and	Duration:	9 days
Unit 7:	Represent and Inte	erpret Data	<b>Duration:</b>	9 days
Unit 8:	Use Strategies and and Subtract	Properties to Add	Duration:	11 days
Unit 9:	Fluently Add and	Subtract Within 1000	<b>Duration:</b>	10 days
Unit 10:	Multiply by Multip	les of Ten	<b>Duration:</b>	6 days
Unit 11:	Use Operations wit Solve Problems	h Whole Numbers to	Duration:	8 days
Unit 12:	Understand Fraction	ons as Numbers	<b>Duration:</b>	10 days
Unit 13:	Fraction Equivale	nce and Comparison	<b>Duration:</b>	10 days
Unit 14:	Solve Time, Capaci Problems	ity and Mass	Duration:	6 days
Unit 15	Attributes of Two-l	Dimensional Shapes	Duration:	8 days
Unit 16	Solving Perimeter	Problems	Duration:	10 days
BOE Appro	oved Revision:			
BOE Initial	Adoption Date: A	August 15, 2017		

	Pine Hill Pu	ıblic Schools					
	Mathematic	s Curriculum					
Unit Title: U	nderstand Multiplication and Division of	Whole Numbers	Unit #: 1				
Course or Grad	de Level: 3 <sup>rd</sup> Grade Math	Length of Time: 8 days					
Pacing	2017-2018: September 11 through September 20 Daily Warm-up: Daily CC Review						
Essential	• How can you find the total number of obje	ects in equal groups?					
Questions	<ul> <li>How can you use a number line and skip counting to show multiplication?</li> <li>How does an array show multiplication?</li> <li>Does order matter when you multiply?</li> <li>How many are in each group?</li> <li>How can you divide using repeated subtraction?</li> <li>How can you use appropriate tools to represent and solve problems?</li> </ul>						
Content	<ul> <li>1.1 Multiplication as Repeated Addition</li> <li>1.2 Multiplication on the Number Line</li> <li>1.3 Arrays and Multiplication</li> <li>1.4 The Commutative Property</li> <li>1.5 Division as Sharing</li> <li>1.6 Division as Repeated Subtraction</li> </ul>	<ul> <li>1.1 Multiplication as Repeated Addition</li> <li>1.2 Multiplication on the Number Line</li> <li>1.3 Arrays and Multiplication</li> <li>1.4 The Commutative Property</li> <li>1.5 Division as Sharing</li> <li>1.6 Division as Repeated Subtraction</li> </ul>					
Skills	<ul> <li>.Use repeated addition to show the relationship between multiplication and addition</li> <li>Use number lines to join equal groups</li> <li>Use arrays as one way to think about and understand multiplication</li> <li>Understand and use the Commutative Property of Multiplication</li> <li>Use sharing to separate equal groups and to think about division</li> <li>Use repeated subtraction to show the relationship between division and subtraction</li> </ul>						
Assessments	<ul> <li>Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review</li> <li>Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark.</li> </ul>						
Interventions / differentiated instruction	<ul> <li>Error Intervention</li> <li>Re-teach</li> <li>Leveled Homework-Intervention, On Level, Advanced</li> <li>Center Activities: On-level; Advanced</li> <li>Strategic Intervention</li> <li>Special Needs</li> <li>ELL Strategies</li> </ul>						

Inter-disciplin	Altering word problems to reflect current classroom themes						
ary	<ul> <li>Theme based center activities</li> <li>Connecting reading strategies to problems solving</li> </ul>						
Connections	- 00						
Lesson resources / activities	<ul> <li>PearsonRealize.com</li> <li>Student and Teacher e-texts</li> <li>Smartboard</li> <li>Online personalized practice</li> <li>Online math tools</li> </ul>						
	Online Television	oday's challenge					
	<ul> <li>Online A</li> </ul>	nother Look Homework Video					
	• Visual Le	earning Animation					
	Online M     Animated	lath Games d Glossary					
	Consum	able student edition					
	• Teacher I	• Teacher Edition					
	<ul> <li>Math and Science Activity (STEM)</li> <li>Teacher's Resource Masters</li> </ul>						
	Manipulatives						
New Jersey Student Learning Standards for Mathematics							
Domain (name a	and #): Ope	rations and Algebraic Thinking 3.OA					
Cluster: Repres	sent and	<b>3.OA.A.1:</b> Interpret products of whole numbers, e.g., interpret 5x7 as the total					
solve problems i	involving	number of objects in 5 groups of 7 objects each. For example, describe and/or					
multiplication a	nd	represent a context in which a total number of objects can be expressed as 5x7.					
division		3.OA.A.2: Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 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 and/or represent a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.					
		s.OA.A.S: 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.					
Understand properties of multiplication and the relationship between multiplication and division.		3.OA.B.5: Apply properties of operations as strategies to multiply and divide.2 Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$ , then $15 \times 2 = 30$ , or by $5 \times 2 = 10$ , then $3 \times 10 = 30$ . (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$ , one can find $8 \times 7$ as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$ . (Distributive property.)					

- 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. •

	<u>21<sup>st</sup> Century Themes</u>								
	Global Awareness	Х	Fir	nancial, Economic,		Civic L	iteracy		Health Literacy
			Busines	ss, and Entrepreneurial					
				Literacy					
	21 <sup>st</sup> Century Skills								
	Creativity and	Х	Critical	Critical Thinking and Problem		Communio	cation and		Information Literacy
	Innovation			Solving		Collabo	oration		
	Media Literacy			ICT Literacy			Life and Career Skills		
<u>8.1</u>	<b>8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.								
Strand: A. Technology Operations			ations	Content Statement:			Indicator:		
and Concepts: Students		Understand and use technology		8.1.5.A.1 Select and use the					
demonstrate a sound		systems.		appropriate digital tools and					
understanding of technology		2			resources	to ac	complish a variety		
and standing of teenhology		tions				of tasks including solving			
conc	epis, systems and	opera	uons.				nrohlems	i ci a a	
							problems.		

	Pine Hill Pu	blic Schools						
	Mathematics Curriculum							
Unit Title: Mu	Itiplication Facts: Use Patterns		Unit #: 2					
Course or Grad	e Level: 3 <sup>rd</sup> Grade Math	Length of Time: 8 days						
Pacing	2017-2018 Sept. 21 through Oct. 2 Daily Warm-up: Daily CC Review							
Essential	<ul> <li>How can you use patterns to multiply by 2.</li> </ul>	and 5?						
Questions	<ul> <li>How can patterns be used to find 9 facts?</li> <li>What are the patterns in multiples of 1 and 0?</li> <li>What are the patterns in multiples of 10?</li> <li>How do you use multiplication facts to solve problems?</li> <li>How can you model with math?</li> </ul>							
Content	<ul> <li>2.1 Two and Five as Factors</li> <li>2.2 Nine as a Factor</li> <li>2.3 Apply Properties: Multiply by 0 and 1</li> <li>2.4 Multiply by 10</li> <li>2.5 Multiplication Facts: 0, 1, 2, 5, 9, and</li> <li>2.6 Model with Math</li> </ul>	10						
Skills	<ul> <li>Gain fluency in multiplication when using 2 and 5 as factors</li> <li>Gain fluency in multiplication when using 9 as a factor</li> <li>Gain fluency in multiplication when multiplying by 0 and 1</li> <li>Gain fluency in multiplication when multiplying by 10</li> <li>Use number relationships and patterns to develop reasoning strategies to support their recall of basic multiplication facts</li> <li>Use previously learned concepts and skills to represents and solve problems</li> </ul>							
Assessments	<ul> <li>Formative: Quick Check; Topic Test; Aneo Problem Solving; Daily Common Core Rev</li> <li>Summative: Placement Test; Mid-Year Be</li> </ul>	cdotal Records; Teacher Observati view enchmark; End of Year Benchmark	on; Independent Practice;					
Interventions / differentiated instruction	<ul> <li>Error Intervention</li> <li>Re-teach</li> <li>Leveled Homework-Intervention, On Leve</li> <li>Center Activities: On-level; Advanced</li> <li>Strategic Intervention</li> <li>Special Needs</li> <li>ELL Strategies</li> </ul>	l, Advanced						

Inter-disciplin	Altering word problems to reflect current classroom themes							
arv	• Th	<ul> <li>Theme based center activities</li> <li>Connecting reading strategies to problems solving</li> </ul>						
Connections	• Co	Connecting reading strategies to problems solving						
т	a Decembra D							
Lesson	<ul> <li>Pearsonk</li> <li>Student a</li> </ul>	realize.com						
resources /	<ul> <li>Student a</li> <li>Smarthog</li> </ul>	and reacher e-texts						
activities	<ul> <li>Online per</li> </ul>	uu arsonalized practice						
	<ul> <li>Online m</li> </ul>	ath tools						
	Online To	adaris challenge						
	Online Sectors	alve and Share						
	Online A	nother Look Homework Video						
	<ul> <li>Visual Le</li> </ul>	earning Animation						
	Online M	lath Games						
	Animated	1 Glossary						
	Consuma	able student edition						
	Teacher H	Edition						
	• Math and Science Activity (STEM)							
	• Teacher's Resource Masters							
	Manipulatives							
New Jersey Student Learning Standards for Mathematics								
Domain (name and #): Operations and Algebraic Thinking 3.OA								
<b>Cluster: Repres</b>	sent and	<b>3.OA.A.1:</b> Interpret products of whole numbers, e.g., interpret 5x7 as the total						
solve problems i	involving	number of objects in 5 groups of 7 objects each. For example, describe and/or						
multiplication a	nd	represent a context in which a total number of objects can be expressed as 5x7.						
division	nu							
urvision		3.OA.A.3: Use multiplication and division within 100 to solve word problems in						
		situations involving equal groups arrays and massurement quantities a g by						
		using drawings and equations with a symbol for the unknown number to represent						
		using drawings and equations with a symbol for the unknown number to represent						
		the problem.						
Understand pro	perties of	<b>3.OA.B.5:</b> Apply properties of operations as strategies to multiply and divide.2						
multiplication a	nd the	Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative						
relationship bet	ween	property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$ , then $15 \times 2 = 30$ , or						
multiplication a	nd	by $5 \times 2 = 10$ , then $3 \times 10 = 30$ . (Associative property of multiplication.) Knowing						
division		that $8 \times 5 = 40$ and $8 \times 2 = 16$ one can find $8 \times 7$ as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40$						
ui vi 51011.		+ 16 = 56 (Distributive property)						
	······							
Solve problems	involving	<b>3.0A.D.9:</b> Identify arithmetic patterns (including patterns in the addition table or						
the four operati	ons, and	multiplication table), and explain them using properties of operations. For example,						
identify and exp	olain	observe that 4 times a number is always even, and explain why 4 times a number						
patterns in arith	nmetic	can be decomposed into two equal addends						
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	Х	Fir	Financial, Economic, Business and Entrepreneurial		Civic Literacy			Health Literacy
			Dusines	Literacy					
	21 <sup>st</sup> Century Skills								
	Creativity and	Х	Critical Thinking and Problem		Х	Communic	cation and		Information Literacy
	Innovation			Solving		Collabo	oration		
	Media Literacy		ICT Literacy		Х		Life and Career Skills		
8.1 Educational Technology: All students will use digital tools to access				s, manage, (	evalu	ate, and synthesize			
information in order to solve pro-			roblems individually	and o	collaborate a	and to creat	e and	communicate	
	knowledge.								
Strand: A. Technology Operations		ations	Content Statement:			Indicator:			
and Concepts: Students		Understand and use technology		8.1.5.A.1 Select and use the					
demonstrate a sound		systems.		appropriate digital tools and					
understanding of technology		,				resources to accomplish a variety		complish a variety	
conc	cepts, systems and	opera	tions.				of tasks including solving		
		•					problems.		

	Pine Hill Pu	ıblic Schools						
	Mathematics Curriculum							
Unit Title: A	Apply Properties: Multiplication Facts for	3, 4, 6, 7, 8	Unit #: 3					
Course or Gr	ade Level: 3 <sup>rd</sup> Grade Math	Length of Time: 10 days						
Pacing	2017-2018							
	Oct. 3 through Oct. 17							
	Daily Warm-up: Daily CC Review							
Essential	• How can you break up a multiplication fac	t?						
Questions	• How can you break apart arrays to multiply	y with 3?						
	• How can you use doubles to multiply with	4?						
	• How can you break apart arrays to multiply	y?						
	• How can you use doubles to multiply with	8?						
	• How do you use strategies to multiply?							
	• How can you multiply 3 numbers?							
	• How can you use repeated reasoning when multiplying?							
Content	• 3.1 The Distributive Property							
	• 3.2 Apply Properties: 3 as a Factor							
	• 3.3 Apply Properties: 4 as a Factor							
	• 3.4 Apply Properties: 6 and 7 as Factors							
	• 3.5 Apply Properties: 8 as a Factor							
	• 3.6 Practice Multiplication Facts							
	• 3.7 The Associative Property: Multiply wi	th 3 Factors						
	• 3.8 Math Practices and Problem Solving:	Repeated Reasoning						
Skills	Use the Distributive Property to solve prob	blems involving multiplication wi	thin 100					
	• Use appropriate tools and the Distributive	Property to break apart unknown	facts with 3 as a factor					
	• Use the Distributive Property to break apart	rt unknown facts with 4 as a facto	or Genetari					
	<ul> <li>Use the Distributive Property to break apart</li> <li>Use the Distributive Property and known f</li> </ul>	rt unknown facts with 6 or 7 as a facts to break apart unknown fact	ractor s with 8 as a factor					
	<ul> <li>Use strategies such as bar diagrams and an</li> </ul>	rays with known facts to solve m	ultiplication problems					
	• Use the Associative Property of Multiplica	tion to group 3 factors and multip	ply					
	• Use repeated reasoning with known facts t	o make generalizations when mu	ltiplying					
Assessments	• Formative: Quick Check; Topic Test; Ane	cdotal Records; Teacher Observa	tion; Independent Practice;					
	Problem Solving; Daily Common Core Re	view						
	• Summative: Placement Test; Mid-Year B	enchmark; End of Year Benchma	rk.					
Interventions	/ • Error Intervention							
differentiated	Ke-teach     Laveled Homowork Intervention Or Lavel	1 Advanced						
instruction	Center Activities: On-level: Advanced	a, Auvanceu						
	Strategic Intervention							
	• Special Needs							
	• ELL Strategies							

Inter-disciplin	Altering word problems to reflect current classroom themes					
ary	• Th	Theme based center activities				
Connections	• Co	nnecting reading strategies to problems solving				
Lasson	Dearson	aaliza com				
Lesson	<ul> <li>Fearson</li> <li>Student a</li> </ul>	Student and Teacher e texts				
resources /	<ul> <li>Student a</li> <li>Smarthoa</li> </ul>	Smarthoard				
activities	Online ne	<ul> <li>Online personalized practice</li> </ul>				
	<ul> <li>Online m</li> </ul>	ath tools				
	Online Te	oday's challenge				
	Online Se	blve and Share				
	Online A	nother Look Homework Video				
	• Visual Le	earning Animation				
	Online M	lath Games				
	• Animated	d Glossary				
	Consuma	able student edition				
	• Teacher H	Edition				
	Math and	Science Activity (STEM)				
	• Teacher's Resource Masters					
	Manipulatives					
New Jersey Student Learning Standards for Mathematics						
Domain (name a	and #): Ope	rations and Algebraic Thinking 3.OA				
<b>Cluster: Repres</b>	sent and	3.OA.A.3: Use multiplication and division within 100 to solve word problems in				
solve problems i	nvolving	situations involving equal groups, arrays, and measurement quantities, e.g., by				
multiplication a	nd	using drawings and equations with a symbol for the unknown number to represent				
division		the problem.				
Understand pro	portios of	3 OA B 5: Apply properties of operations as strategies to multiply and divide 2				
Understand pro	perties of	5.0A.D.S. Apply properties of operations as strategies to multiply and divide.2 Examples: If $(x, 4 - 24)$ is known than $4x(-24)$ is also known (Commutative				
multiplication a	na the	Examples. If $0 \wedge 4 = 24$ is known, then $4 \wedge 0 = 24$ is also known. (Commutative property of multiplication) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$ , then $15 \times 2 = 20$ , or				
relationship between		property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$ , then $15 \times 2 = 30$ , or				
multiplication and		by $5 \times 2 = 10$ , then $3 \times 10 = 30$ . (Associative property of multiplication.) Knowing				
division.		that $8 \times 5 = 40$ and $8 \times 2 = 16$ , one can find $8 \times 7$ as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40$				
		+ 16 = 56. (Distributive property.)				
Solve problems	involving	5.0A.D.9: Identify arithmetic patterns (including patterns in the addition table or				
the four operation	ons, and	multiplication table), and explain them using properties of operations. For example,				
identify and exp	lain	observe that 4 times a number is always even, and explain why 4 times a number				
patterns in arith	imetic	can be decomposed into two equal addends				
Math Practices:		e en la consecuta in coloriza de co				
Niake sen	se of problem	is and persevere in solving them.				
Keason at	viable around	Juanual very.				
Construct     Model with	th mathematic					
	miniate tools of	zə. trategically				
Attend to	priace tools s	uurogiouny.				
<ul> <li>Attend to precision.</li> <li>Look for and make use of structure.</li> </ul>						

•	Look for and express regularity in repeated reasoning.								
				<u>21<sup>st</sup> Century</u>	Then	nes			
	Global Awareness	Х	Financial, Economic, Business, and Entrepreneurial Literacy			Civic Literacy		Health Literacy	
	21 <sup>st</sup> Century Skills								
	Creativity and Innovation	Х	Critical	Critical Thinking and Problem Solving		Communic Collabo	cation and oration		Information Literacy
	Media Literacy			ICT Literacy	Х		Life and Career Skills		
<u>8.1</u>	<b>8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.								
Strand: A. Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.		<b>Content Statement:</b> Understand and use technology systems.		Indicator: 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems					

	Pine Hill Pu	blic Schools					
	Mathematics	Curriculum					
Unit Title: Us	e Multiplication to Divide: Division Facts		Unit #: 4				
Course or Grad	le Level: 3 <sup>rd</sup> Grade Math	Length of Time: 11 days					
Pacing	Oct. 18 through Nov. 1						
	2017-2018						
	Daily Warm-up: Daily CC Review						
Essential	• How can multiplication facts help you divid	de?					
Questions	• What multiplication fact can you use?						
	• How do you divide with 6 and 7?						
	• What multiplication fact can you use?						
	• How can you explain multiplication pattern	s for even and odd numbers?					
	• How do you divide with 1 or 0?						
	• What fact can you use?						
	• How do multiplication and division equations work?						
	• How can you make sense of a problem and persevere in solving it?						
Content	• 4.1 Relate Multiplication and Division						
	• 4.2 Use Multiplication to Divide with 2, 3,	4, and 5					
	• 4.3 Use Multiplication to Divide with 6 and	d 7					
	• 4.4 Use Multiplication to Divide with 8 and	d 9					
	• 4.5 Multiplication Patterns: Even and Odd	Numbers					
	• 4.6 Division Involving 0 and 1						
	• 4.7 Practice Multiplication and Division Fa	acts					
	• 4.8 Solve Multiplication and Division Equa	ations					
	• 4.9 Math Practices and Problem Solving: Make Sense and Persevere						
Skills	• Use multiplication facts to divide						
	• Use multiplication facts to find related divi	sion facts					
	<ul> <li>Use multiplication facts to find related divis</li> <li>Use multiplication facts to find related division</li> </ul>	sion facts					
	<ul> <li>Use knowledge of even and odd numbers to</li> </ul>	b identify multiplication patterns					
	• Use properties to understand division of 0 a	and 1					
	• Use patterns and known facts to find unknown	own multiplication facts. Use mul	tiplication facts to find related				
	division facts.	dunknown values in equations					
	<ul> <li>Use previously learned concepts to find and</li> </ul>	a answer hidden questions to solve	e problems				
Assessments	• Formative: Quick Check; Topic Test; Anec	dotal Records; Teacher Observati	on; Independent Practice;				
	Problem Solving; Daily Common Core Rev	view					
	• Summative: Placement Test; Mid-Year Be	enchmark; End of Year Benchmark	ζ.				
Interventions /	Error Intervention						
differentiated	Re-teach     Lavalad Homowork Intervention On Lavalad	Advanced					
instruction	Leveled Homework-Intervention, On Level	i, Auvanceu					

	Center Activities: On-level; Advanced						
	• Strategic	Intervention					
	• Special N	leeds					
	• ELL Stra	tegies					
Inter-disciplin	• Al	tering word problems to reflect current classroom themes					
ary	• 1h	eme based center activities					
Connections	• 00	nnecting reading strategies to problems solving					
Lesson	• PearsonR	Realize.com					
resources /	• Student a	ind Teacher e-texts					
activities	Smartboa	ard					
activities	Online pe	ersonalized practice					
	• Online m	ath tools					
	• Online T	oday's challenge					
	• Online S	olve and Share					
	• Online A	nother Look Homework Video					
	Visual Le	earning Animation					
	• Online M	fath Games					
	• Animated	d Glossary					
	Consumable student edition     Transform Edition						
	• leacher Edition						
	<ul> <li>Iviatil and Science Activity (STEIVI)</li> <li>Teacher's Pascurce Masters</li> </ul>						
	Icaciici s icesource masters     Manipulativas						
	• Manipula	Now Jorsov Student Learning Standards for Mathematics					
<b>D</b> : (		New Jersey Student Learning Standards for Mathematics					
Domain (name a	and #): Ope	rations and Algebraic Thinking 3.0A					
<b>Cluster: Repres</b>	sent and	<b>3.OA.A.3:</b> Use multiplication and division within 100 to solve word problems in					
solve problems i	involving	situations involving equal groups, arrays, and measurement quantities, e.g., by					
multiplication a	nd	using drawings and equations with a symbol for the unknown number to represent					
division		the problem.					
Understand properties of		3 OA B 5: Apply properties of operations as strategies to multiply and divide 2					
multiplication a	nd the	<b>Examples:</b> If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative					
multiplication a		Examples. If $0 \wedge 4 = 24$ is known, then $4 \wedge 0 = 24$ is also known. (Commutative					
relationship bet	ween	property of multiplication.) $5 \times 5 \times 2$ can be found by $5 \times 5 = 15$ , then $15 \times 2 = 50$ , or					
multiplication a	nd	by $5 \times 2 = 10$ , then $3 \times 10 = 30$ . (Associative property of multiplication.) Knowing					
division.		that $8 \times 5 = 40$ and $8 \times 2 = 16$ , one can find $8 \times 7$ as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40$					
		+ 16 = 56. (Distributive property.)					
		3.OA.B.6: Understand division as an unknown-factor problem. For example, find					
		5.0A.D.O. Understand division as an unknown-factor problem. For example, ind					
		$32 \div 8$ by finding the number that makes 32 when multiplied by 8.					
		$32 \div 8$ by finding the number that makes 32 when multiplied by 8.					
		32 ÷ 8 by finding the number that makes 32 when multiplied by 8.					
Solve problems	involving	<ul> <li>32 ÷ 8 by finding the number that makes 32 when multiplied by 8.</li> <li>3.OA.D.9: Identify arithmetic patterns (including patterns in the addition table or</li> </ul>					
Solve problems the four operation	involving ons, and	<ul> <li>32 ÷ 8 by finding the number that makes 32 when multiplied by 8.</li> <li>3.OA.D.9: Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example,</li> </ul>					
Solve problems the four operati identify and exp	involving ons, and Jain	<ul> <li>32 ÷ 8 by finding the number that makes 32 when multiplied by 8.</li> <li>3.OA.D.9: Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number</li> </ul>					
Solve problems involving the four operations, and identify and explain patterns in arithmetic		<ul> <li>+ 16 = 56. (Distributive property.)</li> <li>3.OA.B.6: Understand division as an unknown-factor problem. For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.</li> <li>3.OA.D.9: Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. 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</li> </ul>					

## 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.

	<u>21<sup>st</sup> Century Themes</u>								
	Global Awareness	X	Fir Busines	nancial, Economic, ss, and Entrepreneurial Literacy		Civic L	iteracy		Health Literacy
	21 <sup>st</sup> Century Skills								
	Creativity and Innovation	Х	Critical	Thinking and Problem Solving	X	Communic Collabo	ation and		Information Literacy
	Media Literacy		ICT Literacy		Х	Life and Career Skills		r Skills	
<u>8.1</u>	<b>8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge								
Strand: A. Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.			Content Statement: Understand and use systems.	e tech	nology	Indicator: 8.1.5.A.1 appropriat resources of tasks in problems.	Selecte dig to action to action	et and use the ital tools and complish a variety ing solving	

	Pine Hill Pu	blic Schools							
	Mathematics	s Curriculum							
Unit Title: Flu	ently Multiply and Divide within 100		Unit #: 5						
Course or Grad	e Level: 3 <sup>rd</sup> Grade Math	Length of Time: 10 days							
Pacing	Nov. 2 through Nov. 17	I							
	2017-2018								
	Daily Warm-up: Daily CC Review								
Essential	• How can you explain patterns in a multiplie	cation chart?							
Questions	• How can you use a multiplication table to s	• How can you use a multiplication table to solve division problems?							
	• How can you find multiplication and divisi	on basic facts?							
	• How do you use strategies to multiply?								
	• How can you solve word problems using m	nultiplication and division?							
	• How can you describe a multiplication fact	?							
	• What is the main idea of a division story?	• What is the main idea of a division story?							
	• How can you use the structure of mathematics?								
Content	• 5.1 Patterns for Multiplication Facts								
	• 5.2 Use a Multiplication Table								
	• 5.3 Find Missing Numbers in a Multiplication Table								
	• 5.4 Use Strategies to Multiply								
	• 5.5 Solve Word Problems: Multiplication and Division Facts								
	• 5.6 Write Math Stories: Multiplication								
	• 5.7 Write Math Stories: Division								
	• 5.8 Math Practices and Problem Solving: I	• 5.8 Math Practices and Problem Solving: Look For and Use Structure							
Skills	• Use the multiplication table and the Distrib	utive Property to find patterns in	factors and products.						
	• Use a multiplication table to find the missing	ng factor in a division problem	-						
	• Use number sense and reasoning while practice of the sense and reasoni	cticing multiplication and division	basic facts						
	<ul> <li>Use strategies such as skip counting and pr</li> <li>Solve multiplication and division problems</li> </ul>	operations to multiply	nd representations						
	<ul> <li>Use multiplication to write and solve real-y</li> </ul>	world problems involving equal gr	oups						
	• Use division to write and solve real-world	problems involving equal groups	F						
	• Use the structures of multiplication and div	vision to compare expressions							
Assessments	• Formative: Quick Check; Topic Test; Anec	edotal Records; Teacher Observati	ion; Independent Practice;						
	Problem Solving; Daily Common Core Rev	view							
	• Summative: Placement Test; Mid-Year Be	enchmark; End of Year Benchmar	k.						
Interventions /	• Error Intervention								
differentiated	Re-teach     Loweled Homework Intermetion On Loweled	1 Advanced							
instruction	<ul> <li>Leveled Homework-Intervention, On Level</li> <li>Center Activities: On-level: Advanced</li> </ul>	i, Auvancea							
	Strategic Intervention								
	• Special Needs								
	• ELL Strategies								

Inter-disciplin	• Alt	tering word problems to reflect current classroom themes				
arv	• Th	eme based center activities				
Connections	• Co	nnecting reading strategies to problems solving				
Connections						
Lesson	• PearsonR	ealize.com				
resources /	<ul> <li>Student a</li> </ul>	nd Teacher e-texts				
activities	<ul> <li>Smartboa</li> </ul>	ırd				
	Online personalized practice					
	• Online math tools					
	Online Today's challenge					
	• Online Solve and Share					
	Online Another Look Homework Video					
	Visual Learning Animation					
	Online M	lath Games				
	Animated	d Glossary				
	Consumation	able student edition				
	Teacher I	Edition				
	Math and	Science Activity (STEM)				
	• Teacher's	s Resource Masters				
	Manipula	tives				
		New Jersey Student Learning Standards for Mathematics				
Domain (name a	and #): Ope	rations and Algebraic Thinking 3.OA				
Cluster: Repres	sent and	<b>3.OA.A.3:</b> Use multiplication and division within 100 to solve word problems in				
solve problems i	involving	situations involving equal groups, arrays, and measurement quantities, e.g., by				
multiplication a	nd	using drawings and equations with a symbol for the unknown number to represent				
division	nu	the problem				
		the problem.				
Multiply and di	vide	3.OA.C.7: Fluently multiply and divide within 100, using strategies such as the				
within 100.		relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$ , one				
		knows $40 \div 5 = 8$ ) or properties of operations. By the end of Grade 3, know from				
		memory all products of two one digit numbers				
		memory an products of two one-digit numbers.				
Solve problems	involving	3.OA.D.9: Identify arithmetic patterns (including patterns in the addition table or				
the four operati	ons, and	multiplication table), and explain them using properties of operations. For example,				
identify and exp	lain	observe that 4 times a number is always even. and explain why 4 times a number				
natterns in arith	metic	can be decomposed into two equal addends				
Math Practices		at attempoor moo the equilibrium				
<ul> <li>Make sen</li> </ul>	se of problem	s and persevere in solving them.				
Reason al	ostractly and a	nuantitatively				
Construct	viable argum	ents and critique the reasoning of others				
<ul> <li>Model with mathematics.</li> </ul>						

- 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> <u>Century Themes</u>								
	Global Awareness	Х	Fir	nancial, Economic,		Civic L	iteracy		Health Literacy
			Busines	ss, and Entrepreneurial					
				Literacy					
	<u>21<sup>st</sup> Century Skills</u>								
	Creativity and	Х	Critical	Thinking and Problem	Х	Communic	ation and		Information Literacy
	Innovation			Solving		Collabo	oration		
	Media Literacy		ICT Literacy		Х		Life and Career Skills		
<u>8.1</u>	<b>Educational Tech</b>	nolog	gy: All s	students will use digi	tal to	ols to access	s, manage, o	evalu	ate, and synthesize
	information in or	der to	solve p	roblems individually	and	collaborate a	and to creat	e and	communicate
			_	knowle	dge.				
Stran	d: A. Technology	Opera	ations	<b>Content Statement:</b>			Indicator:		
and Concepts: Students			Understand and use technology		8.1.5.A.1 Select and use the				
demonstrate a sound			systems.			appropriate digital tools and			
understanding of technology						resources	to ac	complish a variety	
achieves and an existing						of tasks in	cludi	ing solving	
conc	epis, systems unu (	operu	nons.				problems		
	1 · 2	1					problems.		

	Pine Hill Pu	blic Schools	
	Mathematics	s Curriculum	
Unit Title: Co	onnect Area to Multiplication and Divisio	n	Unit #: 6
Course or Grad	de Level: 3 <sup>rd</sup> Grade Math	Length of Time: 9 days	
Pacing	Nov. 20 through Dec. 5 2017-2018		
	Daily Warm-up: Daily CC Review		
Essential	• How do you measure area?		
Questions	<ul> <li>How can you measure area using non-stand</li> <li>How can you measure area using standard</li> <li>How can you find the area of a figure?</li> <li>How can the area of rectangles represent th</li> <li>How can you find the area of an irregular s</li> <li>How can you use structure to solve problem</li> </ul>	dard units? units of length? ne Distributive Property? hape? ns?	
Content	<ul> <li>6.1 Cover Regions</li> <li>6.2 Area: Nonstandard Units</li> <li>6.3 Area: Standard Units</li> <li>6.4 Area of Squares and Rectangles</li> <li>6.5 Apply Properties: Area and the Distrib</li> <li>6.6 Apply Properties: Area of Irregular Sh</li> <li>6.7 Math Practices and Problem Solving: I</li> </ul>	utive Property apes Look For and Use Structure	
Skills Assessments	<ul> <li>Use unit squares to find the area of a shape</li> <li>Use unit squares to find the area of a figure</li> <li>Use standard units to measure the area of a</li> <li>Use unit squares and multiplication to find</li> <li>Use areas of rectangles to model the Distri</li> <li>Use area of rectangles to find the area of ir</li> <li>Solve problems by breaking apart or change</li> <li>Formative: Quick Check; Topic Test; Anere</li> </ul>	shape the areas of squares and rectangle butive Property of Multiplication regular shapes ing the problem into a simpler pro cdotal Records; Teacher Observat	oblem ion; Independent Practice;
	<ul> <li>Problem Solving; Daily Common Core Re</li> <li>Summative: Placement Test; Mid-Year Be</li> </ul>	view enchmark; End of Year Benchmar	k.
Interventions / differentiated instruction	<ul> <li>Error Intervention</li> <li>Re-teach</li> <li>Leveled Homework-Intervention, On Leve</li> <li>Center Activities: On-level; Advanced</li> <li>Strategic Intervention</li> <li>Special Needs</li> <li>ELL Strategies</li> </ul>	l, Advanced	

Inter-disciplin	Altering word problems to reflect current classroom themes					
ary	<ul> <li>Theme based center activities</li> <li>Connecting reading strategies to problems solving</li> </ul>					
Connections	Connecting reading strategies to problems solving					
T	• DeensonD					
Lesson	<ul> <li>Pearsonk</li> <li>Student a</li> </ul>	realize.com				
resources /	<ul> <li>Student a</li> <li>Smarthar</li> </ul>	ind Teacher e-texts				
activities	<ul> <li>Online no</li> </ul>	nu arsonalized practice				
	• Online math tools					
	Online Today's challenge					
	Online Solve and Share					
	Online Another Look Homework Video					
	Visual Learning Animation					
	Online M	lath Games				
	Animated	d Glossary				
	Consum	able student edition				
	• Teacher I	Edition				
	Math and	l Science Activity (STEM)				
	• Teacher's	s Resource Masters				
	Manipula	atives				
		New Jersey Student Learning Standards for Mathematics				
Domain (name a	and #): Mea	surement and Data 3.MD				
Cluster:		3.MD.C.5 a and b: Recognize area as an attribute of plane figures and understand				
Geometric meas	surement:	concepts of area measurement.				
understand con	cepts of	a. A square with side length 1 unit, called "a unit square," is said to have "one				
area and relate	area to	square unit" of area, and can be used to measure area.				
multiplication a	nd to					
addition.		b. A plane figure which can be covered without gaps or overlaps by n unit squares				
		is said to have an area of n square units.				
		3.MD.C.6: Measure areas by counting unit squares (square cm, square m, square				
		in, square ft, and nonstandard units).				
		3.MD.C.7 a. b. c. & d: Relate area to the operations of multiplication and addition.				
		a Find the area of a rectangle with whole-number side lengths by tiling it and				
		show that the area is the same as would be found by multiplying the side lengths				
		show that the area is the same as would be found by multiplying the side lengths.				
		b. Multinly side longths to find areas of restangles with whole number side longths				
		b. Multiply side lengths to find areas of rectangles with whole number side lengths				
		in the context of solving real world and mathematical problems, and represent				
		whole-number products as rectangular areas in mathematical reasoning.				
		c. Use tiling to show in a concrete case that the area of a rectangle with				
		whole-number side lengths a and b + c is the sum of a $\times$ b and a $\times$ c. Use area				
		models to represent the distributive property in mathematical reasoning.				
		d. Recognize area as additive. Find areas of rectilinear figures by decomposing				
		them into nonoverlapping rectangles and adding the areas of the non-overlapping				
		parts, applying this technique to solve real world problems.				

## Math Practices:

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- Construct viable arguments and critique the reasoning of others.
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- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

	<u>21<sup>st</sup> Century Themes</u>								
	Global Awareness	Х	Fir	nancial, Economic,		Civic Li	teracy		Health Literacy
			Busines	ss, and Entrepreneurial					
				Literacy					
	21 <sup>st</sup> Century Skills								
	Creativity and	Х	Critical	Thinking and Problem	Х	Communic	ation and		Information Literacy
	Innovation			Solving		Collabo	iboration		
	Media Literacy			ICT Literacy	Х		Life and Career Skills		
8.1 Educational Technology: All stud				students will use digi	tal to	ols to access	, manage, o	evalu	ate, and synthesize
	information in or	der to	solve p	roblems individually	and o	collaborate a	nd to creat	e and	communicate
			-	knowle	dge.				
Stran	d: A. Technology	Opera	ations	<b>Content Statement:</b>			Indicator:		
and	Concepts: Studen	ts		Understand and use technology		nology	8.1.5.A.1 Select and use the		
demonstrate a sound			systems.			appropriate digital tools and			
understanding of technology					resources	to ac	complish a variety		
					of tasks including solving				
conc	cepts, systems and o	opera	tions.					uuu	ing solving
							problems.		

	Pine Hill Pu	blic Schools	
	Mathematics	Curriculum	
Unit Title: Re	present and Interpret Data		Unit #: 7
Course or Grad	e Level: 3 <sup>rd</sup> Grade Math	Length of Time: 7 days	
Pacing	Dec. 6 through Dec. 14		
	2017-2018		
	Daily Warm-up: Daily CC Review		
Essential	• How can you read picture graphs?		
Questions	• How do you make a picture graph?		
	• How do you make a bar graph?		
	• How can you solve problems using graphs?	2	
	• How can you be precise when solving math	n problems?	
Content	• 7.1 Read Picture Graphs and Bar Graphs		
	• 7.2 Make Picture Graphs		
	• 7.3 Make Bar Graphs		
	• 7.4 Solve Word Problems Using Information	on in Graphs	
	• 7.5 Math Practices and Problem Solving: P	recision	
Skills	• Use graphs to compare and interpret data		
	• Use frequency tables and picture graphs to	compare and interpret data	
	• Use scaled bar graphs to represent data sets		
	<ul> <li>Use graphs to solve problems</li> <li>Use words symbols and numbers to accur.</li> </ul>	ately and precisely solve math pro	hlems
Assessments	• Formative: Ouick Check: Topic Test: Anec	cdotal Records: Teacher Observati	on: Independent Practice:
	Problem Solving; Daily Common Core Rev	view	,,
	• Summative: Placement Test; Mid-Year Be	enchmark; End of Year Benchmark	к.
Interventions /	Error Intervention		
differentiated	• Re-teach		
instruction	<ul> <li>Leveled Homework-Intervention, On Level</li> <li>Center Activities: On-level: Advanced</li> </ul>	I, Advanced	
	Strategic Intervention		
	• Special Needs		
	ELL Strategies		
Inter-disciplin	<ul> <li>Altering word problems to reflect current</li> </ul>	rrent classroom themes	
ary	<ul> <li>Theme based center activities</li> <li>Connecting reading strategies to prol</li> </ul>	alems solving	
Connections	- Connecting reading strategies to prot	Jenis solving	
Lesson	PearsonRealize.com		
resources /	Student and Teacher e-texts		
activities	<ul> <li>Smartboard</li> <li>Online personalized practice</li> </ul>		
	<ul> <li>Online math tools</li> </ul>		
	Online Today's challenge		

<ul> <li>Online Solve and Share</li> <li>Online Another Look Homework Video</li> </ul>									
<ul> <li>Visual Learning Animation</li> <li>Online Math Games</li> </ul>									
	• Onlin	ne Mat	h Games						
	• Anni • Con	sumab	le student edition						
• Teacher Edition									
	• Math and Science Activity (STEM)								
	• Teacl	ner's R	Resource Masters						
	• Mani	pulati	ves						
		N	ew Jersey Student Learning	Stand	ards for Mathematics				
Domain (	name and #): (	Opera	tions and Algebraic Thinking	g <b>3.0</b> 4	Α				
<b>Cluster:</b>			3.OA.A.3: Use multiplication	and d	livision within 100 to sol	lve word problems in			
Represen	t and solve	5	situations involving equal gro	ups, a	rrays, and measuremer	nt quantities, e.g., by			
problems	involving	1	using drawings and equations	s with	a symbol for the unkno	wn number to represent			
multiplica	ation and	1	the problem.						
division									
Solve pro	blems involvin	g	3.OA.D.8: Solve two-step wor	d pro	blems using the four op	erations. Represent these			
the four o	operations, and	J	problems using equations wit	h a le	tter standing for the unl	known quantity. Assess			
identify a	nd explain	1	the reasonableness of answers	s usin	g mental computation a	nd estimation strategies			
patterns i	in arithmetic.	i	including rounding						
		1	assurement and Data 3 MD						
Domain (	name and #): 1	vieas	urement and Data 3.MD						
Represen	t and interpret		<b>3.MD.B.3:</b> Draw a scaled picture graph and a scaled bar graph to represent a data						
data.		5	set with several categories. Solve one- and two-step "how many more" and "how						
		1	many less" problems using information presented in scaled bar graphs. For						
			example, draw a bar graph in which each square in the bar graph might represent 5						
1			pets						
		]	pets						
Math Prac	ctices:	]	pets						
Math Prac	e <b>tice</b> s: lake sense of prol	olems :	and persevere in solving them.						
Math Prac • M • R	etices: lake sense of prol eason abstractly a	olems a	pets and persevere in solving them. antitatively.						
Math Prac Math Prac Math Prac	ctices: lake sense of prol eason abstractly a onstruct viable ar	olems a and qua gumer	pets and persevere in solving them. antitatively. ats and critique the reasoning of ot	hers.					
Math Prac • M • R • C • M	ctices: lake sense of prol eason abstractly a onstruct viable ar lodel with mather se appropriate to	olems a and qua gumer natics.	pets and persevere in solving them. antitatively. hts and critique the reasoning of ot	hers.					
Math Prac Math Prac Math Prac Co Co Math U A	etices: lake sense of proleason abstractly a onstruct viable ar lodel with mather se appropriate too	olems a and qua gumer matics. ols stra	pets and persevere in solving them. antitatively. nts and critique the reasoning of ot ntegically.	hers.					
Math Prac Math Prac M R C M U A L C	ctices: lake sense of prol eason abstractly a onstruct viable ar lodel with mather se appropriate too ttend to precision pok for and make	blems and qua gumer natics. bls stra use oi	pets and persevere in solving them. antitatively. hts and critique the reasoning of ot htegically. f structure.	hers.					
Math Prac Math Prac M R C M U A L L L	ctices: lake sense of prol eason abstractly a onstruct viable ar lodel with mather se appropriate too ttend to precision ook for and make ook for and expre	blems and qua gumer natics. bls stra use of ss reg	pets and persevere in solving them. antitatively. hts and critique the reasoning of ot tregically. f structure. ularity in repeated reasoning.	hers.					
Math Prac Math Prac M R C M M U A L L L L	etices: lake sense of prol eason abstractly a onstruct viable ar lodel with mather se appropriate too ttend to precision pok for and make pok for and expre	blems and qua gumer natics. ols stra use of sss reg	pets and persevere in solving them. antitatively. nts and critique the reasoning of ot negically. f structure. ularity in repeated reasoning.	hers.					
Math Prac Math Prac Math Prac Co Math U A La La	ctices: lake sense of prol eason abstractly a onstruct viable ar lodel with mather se appropriate too ttend to precision ook for and make ook for and expre	blems and qua gumer natics. bls stra use of ss reg	pets and persevere in solving them. antitatively. nts and critique the reasoning of ot ntegically. f structure. ularity in repeated reasoning. 21 <sup>st</sup> Century	hers.	<u>nes</u>				
Math Prac Math Prac M R C M U A L L C L C C M C C C C C C C C C C C C C	ctices: lake sense of proleason abstractly a onstruct viable ar lodel with mather se appropriate too ttend to precision ook for and make ook for and expre-	blems and qua gumer natics. bls stra use of	pets and persevere in solving them. antitatively. Its and critique the reasoning of ot tregically. f structure. ularity in repeated reasoning. 21 <sup>st</sup> Century	hers.	nes Civic Literacy	Health Literacy			
Math Prac Math Prac M R C M U A L C L C M Glo	ctices: lake sense of proleason abstractly a onstruct viable ar lodel with mather se appropriate too ttend to precision ook for and make ook for and expre-	blems and quarters	pets and persevere in solving them. antitatively. hts and critique the reasoning of ot tregically. f structure. ularity in repeated reasoning. <u>21<sup>st</sup> Century</u> Financial, Economic, Business, and Entrepreneurial	hers.	nes Civic Literacy	Health Literacy			
Math Prac Math Prac Main Ri Cite Main Cite Main Cite A La Cite	ctices: lake sense of proleason abstractly a onstruct viable ar lodel with mather se appropriate too ttend to precision ook for and make ook for and expre- bal Awareness	blems and qua gumer natics. bls stra use of sss reg	pets and persevere in solving them. antitatively. its and critique the reasoning of ot itegically. f structure. ularity in repeated reasoning. <u>21<sup>st</sup> Century</u> Financial, Economic, Business, and Entrepreneurial Literacy	hers.	nes Civic Literacy	Health Literacy			
Math Prac Math Prac M R C M U A L L Glo	ctices: lake sense of proleason abstractly a onstruct viable ar lodel with mather se appropriate too ttend to precision ook for and make ook for and expre- bal Awareness	blems and quagumer matics. bls stra use of ss reg	and persevere in solving them. antitatively. nts and critique the reasoning of ot ntegically. f structure. ularity in repeated reasoning. 21 <sup>st</sup> Century Financial, Economic, Business, and Entrepreneurial Literacy 21 <sup>st</sup> Centur	hers. Ther y Ski	nes Civic Literacy	Health Literacy			
Math Prac Math Prac Main Ri C Main C Main C A La Caller Glo	ctices: lake sense of proleason abstractly a onstruct viable ar lodel with mather se appropriate too ttend to precision ook for and make ook for and expre- bal Awareness	blems and quarter of the second secon	and persevere in solving them. antitatively. nts and critique the reasoning of ot tegically. f structure. ularity in repeated reasoning. <u>21<sup>st</sup> Century</u> Financial, Economic, Business, and Entrepreneurial Literacy <u>21<sup>st</sup> Centur</u> Critical Thinking and Problem	hers. Ther y Ski	Civic Literacy	Health Literacy			
Math Prac Math Prac Math Prac C M C M C C	ctices: [ake sense of proleason abstractly a onstruct viable ar [odel with mathen se appropriate too ttend to precision ook for and make ook for and expre- bal Awareness creativity and Innovation	blems and quagumer natics. ols stra use of sss regr X	and persevere in solving them. antitatively. nts and critique the reasoning of ot ntegically. f structure. ularity in repeated reasoning. <u>21<sup>st</sup> Century</u> Financial, Economic, Business, and Entrepreneurial Literacy <u>21<sup>st</sup> Centur</u> Critical Thinking and Problem Solving	hers. Ther y Skil X	nes Civic Literacy	Health Literacy			

**8.1 Educational Technology:** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge

	Kilowicuge.	
Strand: A. Technology Operations	Content Statement:	Indicator:
and Concepts: Students	Understand and use technology	8.1.5.A.1 Select and use the
demonstrate a sound	systems.	appropriate digital tools and
understanding of technology		resources to accomplish a variety
concepts, systems and operations.		of tasks including solving
1 . 7 1		problems.

	Pine Hill Pu	blic Schools					
	Mathematics	s Curriculum					
Unit Title:	Use Strategies and Properties to Add and S	ubtract	Unit #: 8				
Course or Gr	rade Level: 3 <sup>rd</sup> Grade Math	Length of Time: 11 days					
Pacing	2017-2018						
	Dec. 15 through Jan. 9						
	Daily Warm-up: Daily CC Review						
Essential	• What are some properties of addition?						
Questions	• How can you find addition patterns?						
	• How can you round numbers?						
	• How can you add with mental math?						
	• How can you subtract with mental math?						
	• How can you estimate sums?						
	• How can you estimate differences?						
• How can the relationship between addition and subtraction help you solve problems?							
• How can you model with math?							
Content	81 Addition Properties						
	<ul> <li>8.2 Algebra: Addition Properties</li> </ul>						
	• 8.3 Round Whole Numbers						
	• 8.4 Mental Math: Addition						
	• 8.5 Mental Math: Subtraction						
	• 8.6 Estimate Sums						
	• 8.7 Estimate Differences						
	• 8.8 Relate Addition and Subtraction						
	• 8.9 Math Practices and Problem Solving: Model with Math						
SI-:II.a	Solve real world problems using properties	afaddition					
SKIIIS	<ul> <li>Solve real-world problems using properties</li> <li>Identify patterns in the addition table and e</li> </ul>	xplain them using algebraic thinki	ng				
	• Use place value and a number line to round	l numbers					
	• Use mental math to add						
	• Use mental math to subtract	imata a aum					
	<ul> <li>Use rounding or compatible numbers to est</li> <li>Use rounding or compatible numbers to est</li> </ul>	timate a sum					
	<ul> <li>Solve one-step and multi-step problems using the second sec</li></ul>	ing strategies based on the relation	ship between addition and				
	subtraction		•				
	Solve one-step and multi-step problems by	modeling with math					
Assessments	Formative: Quick Check; Topic Test; Aner	cdotal Records; Teacher Observati	on; Independent Practice;				
	Problem Solving; Daily Common Core Re	view Anahmark: End of Voor Donahmark	<i>,</i>				
	• Summative: Placement lest; Mid-Year Be	enchmark; End of Year Benchmarl	<u>κ.</u>				

Interventions /	• Error Intervention					
differentiated	• Re-teach					
instruction	• Leveled	Homework-Intervention, On Level, Advanced				
	Strategic Intervention					
	Snecial Needs					
	• FLI Strategies					
Inton diasinlin	Altering word problems to reflect current classroom themes					
inter-disciplin	- Al	<ul> <li>Theme based center activities</li> </ul>				
ary		<ul> <li>Connecting reading strategies to problems solving</li> </ul>				
Connections	Conneeding reading strategies to problems solving					
Lesson	• PearsonRealize.com					
resources /	• Student a	and Teacher e-texts				
activities	• Smartboard					
	Online personalized practice					
	• Online m	ath tools				
	• Online Te	oday's challenge				
	Online Se	olve and Share				
	• Online A	nother Look Homework Video				
	• Visual Le	earning Animation				
	• Online M	fath Games				
	Animated Glossary					
	Consumable student edition					
	• Teacher Edition					
	Math and Science Activity (STEM)					
	• Teacher's	s Resource Masters				
	• Manipula	AllVes				
	New Jersey Student Learning Standards for Mathematics					
Grade or Conce	eptual Categ	gory (HS only): Third				
Domain (name a	and #): Ope	rations and Algebraic Thinking 3.OA				
Cluster:						
Solve problems	involving	<b>3.OA.D.9:</b> Identify arithmetic patterns (including patterns in the addition table or				
the four operati	ons, and	multiplication table), and explain them using properties of operations. For example,				
identify and exr	lain	observe that 4 times a number is always even, and explain why 4 times a number				
natterns in arith	imetic	can be decomposed into two equal addends				
	inicue.	can be decomposed into two equal addentis.				
Domain (name a	and #): Nun	hbers and Operations in Base Ten 3.NBT				
Use place value	-	3 NBT A 1: Use place value understanding to round whole numbers to the nearest				
understanding and		10 or 100				
nronortios of operations						
properties of op						
to perform mul	u-aigit	3.NB1.A.2: Fluently add and subtract within 1000 using strategies and algorithms				
arithmetic.		based on place value, properties of operations, and/or the relationship between				
		addition and subtraction.				
Math Practices:						
<ul> <li>Make sen</li> </ul>	0 11	a and parsovers in solving them				
<ul> <li>Make sense of problems and persevere in solving them.</li> <li>Beasen abstractly and quantitatively.</li> </ul>						
• Reason al	bstractly and o	quantitatively.				
<ul><li>Reason al</li><li>Construct</li></ul>	bstractly and of viable argum	quantitatively. nents and critique the reasoning of others.				

• Use appropriate tools strategically.

- Attend to precision. •
- •
- Look for and make use of structure. Look for and express regularity in repeated reasoning. •

	<u>21<sup>st</sup> Century Themes</u>								
	Global Awareness	Х	Fir	nancial, Economic,		Civic L	iteracy		Health Literacy
			Busines	ss, and Entrepreneurial					
				Literacy					
	21 <sup>st</sup> Century Skills								
	Creativity and	Х	Critical	Thinking and Problem	Х	Communic	ation and		Information Literacy
	Innovation			Solving		Collabo	oration		
	Media Literacy		ICT Literacy				Life and Career Skills		
<u>8.1</u>	<b>Educational Tech</b>	nolog	<b>y:</b> All s	students will use digi	tal to	ols to access	s, manage,	evalu	ate, and synthesize
	information in or	der to	solve p	roblems individually	and o	collaborate a	and to creat	e and	communicate
			-	knowle	dge.				
Stran	d: A. Technology	Opera	ations	Content Statement:			Indicator:		
and Concepts: Students			Understand and use technology			8.1.5.A.1 Select and use the			
demonstrate a sound			systems.			appropriate digital tools and		ital tools and	
understanding of technology						resources	to ac	complish a variety	
conc	epts. systems and	opera	tions.				of tasks in	ncludi	ing solving
concepts, systems and operations.						problems.			

Mathematics Curriculum       Unit #: 9         Unit #: 9         Course or Grad- Level: 3 <sup>rd</sup> Grade Math       Length of Time: 10 days         Pacing       Jan. 10 through Jan. 25 2017-2018         Daily Warm-up: Daily CC Review         Essential Questions       OH warm-up: Daily CC Review         Essential Questions       OH warm on use addition problems into smaller ones?         How can you use addition to solve problems?       How can you use addition to solve problems?       How can you use addition problems into smaller ones?         How can you use subtraction to solve problems?       How can you use subtraction to solve problems?       How can you use subtraction to solve problems?         How can you use subtract from a number with one or more zeros?       How can you construct arguments?       How can you construct arguments?         * How can you construct arguments?       9.1 Use Partial Sums to Add       9.2 Add 3-digit Numbers       \$9.3 Continue to Add 3-digit Numbers         * 9.5 Use Partial Differences to Subtract       9.6 Subtract 3-digit Numbers       \$9.7 Continue to Subtract 3-digit Numbers         * 9.7 Continue to Subtract 3-digit Numbers       9.7 Continue to Subtract 3-digit Numbers       \$9.8 Math Practices and Problem Solving: Construct Arguments         Skills       Add trow 3-digit numbers using the standard a	Pine Hill Public Schools								
Unit Title:       Fluently Add and Subtract Within 1000       Unit #: 9         Course or Grade Level: 3 <sup>rd</sup> Grade Math       Length of Time: 10 days         Pacing       Jan. 10 through Jan. 25 2017-2018       Jan. 25 2017-2018         Daily Warm-up: Daily CC Review	Mathematics Curriculum								
Course or Grade Level: 3 <sup>rd</sup> Grade Math       Length of Time: 10 days         Pacing       Jan. 10 through Jan. 25 2017-2018         Daily Warm-up: Daily CC Review         Essential Questions <ul> <li>How can you break large addition problems into smaller ones?</li> <li>How can you use addition to solve problems?</li> <li>How can you use addition to solve problems?</li> <li>How can you use addition to solve problems?</li> <li>How can you use subtraction to solve problems?</li> <li>How can you construct arguments?</li> <li>You can you construct arguments?</li> <li>Susting</li> <li>9.1 Use Partial Sums to Add</li> <li>9.2 Add 3-digit Numbers</li> <li>9.4 Add 3 -digit Numbers</li> <li>9.4 Add 3 -digit Numbers</li> <li>9.5 Use Partial Differences to Subtract</li> <li>9.6 Subtract 3-digit Numbers</li> <li>9.7 Continue to Subtract 3-digit Numbers</li> <li>9.7 Continue to Subtract 3-digit Numbers</li> <li>9.8 Math Practices and Problem Solving: Construct Arguments</li> <li>Skills</li> <li>Add two 3-digit numbers using the standard algorithm</li> <li>Add 3-digit numbers using the standard algorithm</li> <li>Add two a-digit numbers using the st</li></ul>	Unit Title: Flu	ently Add and Subtract Within 1000		Unit #: 9					
Pacing       Jan. 10 through Jan. 25 2017-2018         Daily Warm-up: Daily CC Review         Essential Questions       How can you break large addition problems into smaller ones?         How can you use addition to solve problems?         How can you use subtraction problems into smaller ones?         How can you use subtraction to solve problems?         How can you use subtract from a number with one or more zeros?         How can you construct arguments?         How can you construct arguments?         9.1 Use Partial Sums to Add         9.2 Add 3 -digit Numbers         9.3 Continue to Add 3-digit Numbers         9.4 Add 3 or More Numbers         9.5 Use Partial Differences to Subtract         9.6 Subtract 3-digit Numbers         9.7 Continue to Subtract 3-digit Numbers         9.8 Math Practices and Problem Solving: Construct Arguments         Skills       Add two 3-digit numbers by breaking apart problems into simpler problems         Add two 3-digit numbers using the standard algorithm       Add three or more n	Course or Grade Level: 3 <sup>rd</sup> Grade Math     Length of Time: 10 days								
Daily Warm-up: Daily CC ReviewEssential Questions• How can you break large addition problems into smaller ones? • How can you use addition to solve problems? • How can you use addition to solve problems? • How can you use addition to solve problems? • How can you use addition to solve problems into smaller ones? • How can you use subtraction problems into smaller ones? • How can you use subtraction problems into smaller ones? • How can you use subtraction problems into smaller ones? • How can you use subtract from a number with one or more zeros? • How can you construct arguments?Content• 9.1 Use Partial Sums to Add • 9.2 Add 3-digit Numbers • 9.3 Continue to Add 3-digit Numbers • 9.4 Add 3 or More Numbers • 9.5 Use Partial Differences to Subtract • 9.6 Subtract 3-digit Numbers • 9.7 Continue to Subtract 3-digit Numbers • 9.7 Continue to Subtract 3-digit Numbers • 9.8 Math Practices and Problem Solving: Construct ArgumentsSkills• Add two 3-digit numbers by breaking apart problems into simpler problems • Add 3-digit numbers using the standard algorithm • Add three or more numbers using the standard algorithm • Add three or more numbers using the standard algorithm • Subtract 3-digit numbers using the standard algorithm 	PacingJan. 10 through Jan. 25 2017-2018								
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Content       9.1 Use Partial Sums to Add         9.2 Add 3-digit Numbers       9.3 Continue to Add 3-digit Numbers         9.3 Continue to Add 3-digit Numbers       9.4 Add 3 or More Numbers         9.5 Use Partial Differences to Subtract       9.6 Subtract 3-digit Numbers         9.7 Continue to Subtract 3-digit Numbers       9.7 Continue to Subtract 3-digit Numbers         9.8 Math Practices and Problem Solving: Construct Arguments         Skills       • Add two 3-digit numbers by breaking apart problems into simpler problems         • Add 3-digit numbers using the standard algorithm         • Add three or more numbers using the standard algorithm         • Add three or more numbers using the standard algorithm         • Subtract 3-digit numbers using the standard algorithm         • Subtract 3-digit numbers using the standard algorithm									
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<ul> <li>Subtract multi-digit numbers using the expanded algorithm</li> <li>Subtract 3-digit numbers using the standard algorithm</li> </ul>		• Add three or more numbers using the stand	ard algorithm						
• Subtract 5-digit numbers using the standard algorithm		<ul> <li>Subtract multi-digit numbers using the exp</li> <li>Subtract 3 digit numbers using the standard</li> </ul>	anded algorithm						
• Subtract a 3-digit number from another 3-digiti number with one or more zeros using the standard algorithm		<ul> <li>Subtract 3-digit numbers using the standard</li> <li>Subtract a 3-digit number from another 3-d</li> </ul>	igiti number with one or more zer	os using the standard algorithm					
Assessments • Formative: Ouick Check: Topic Test: Anecdotal Records: Teacher Observation: Independent Practice:	Assessments	• Formative: Ouick Check: Topic Test: Ane	cdotal Records: Teacher Observati	on: Independent Practice:					
Problem Solving; Daily Common Core Review		Problem Solving; Daily Common Core Rev	view	· · · · · · · · · · · · · · · · · · ·					
• Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark.		• Summative: Placement Test; Mid-Year Be	enchmark; End of Year Benchmarl	ζ.					
Interventions / • Error Intervention	Interventions /	Error Intervention							
differentiated • Re-teach	differentiated	• Re-teach							
• Leveled Homework-Intervention, On Level, Advanced	instruction	• Leveled Homework-Intervention, On Leve	l, Advanced						
• Center Activities: On-level; Advanced		• Center Activities: On-level; Advanced							
Strategic Intervention     Special Needs		Strategic Intervention     Special Needs							
ELL Strategies		ELL Strategies							

Inter-disciplin	• /	Alteri	ing word problems to reflect curre	nt clas	ssroom themes		
ary	• ]	Theme based center activities					
Connections	• (	Conn	ecting reading strategies to proble	ms so	lving		
Lesson	• Pearson	nRea	lize.com				
resources /	• Studen	t and	Teacher e-texts				
activities	<ul> <li>Smartb</li> </ul>	oard					
	<ul> <li>Online</li> </ul>	pers	onalized practice				
	• Online	math	n tools				
	• Online	Toda	ay's challenge				
	• Online	Solv	e and Share				
	• Online	Ano	ther Look Homework Video				
	<ul> <li>Visual</li> <li>Online</li> </ul>	Mot	h Gamas				
	<ul> <li>Animation</li> </ul>	ted G	llossary				
	Consu	mahl	e student edition				
	<ul> <li>Teache</li> </ul>	r Edi	tion				
	• Math a	nd So	cience Activity (STEM)				
	• Teache	r's R	esource Masters				
	<ul> <li>Manipu</li> </ul>	ılativ	ves				
		N	ew Jersey Student Learning S	Stand	ards for Mathematics		
Grade or Conce	ptual Cat	egor	y (HS only): Third				
	•	0	• 、 • /				
Domain (name a	und #): Nu	ımb	ers and Operations in Bas	e Ten	3.NBT		
Use place value		3	<b>B.NBT.A.2:</b> Fluently add and	subtr	act within 1000 using st	rateg	ies and algorithms
understanding a	ınd	l	based on place value, properties of operations, and/or the relationship between				
properties of ope	erations	a	addition and subtraction.				
to perform mult	i-digit						
arithmetic.							
Math Practices:							
Make sense	se of proble	ems a	and persevere in solving them.				
<ul> <li>Reason at</li> </ul>	ostractly and	d qua	antitatively.				
Construct	viable argu	imen	ts and critique the reasoning of ot	hers.			
Model wit	th mathema	itics.	11				
• Use appro	priate tools	s stra	tegically.				
• Attend to	precision.	se of	structure				
• Look for :	and express	reor	larity in repeated reasoning				
	and express	rege	antity in repeated reasoning.				
<u>21<sup>st</sup> Century Themes</u>							
Global Awa	areness 2	X	Financial, Economic,		Civic Literacy		Health Literacy
			Business, and Entrepreneurial				
			Literacy				
			<u>21<sup>st</sup> Centur</u>	<u>y Ski</u> l	<u>lls</u>		
Creativity Innovat	and and	Х	Critical Thinking and Problem Solving	Х	Communication and Collaboration		Information Literacy
Media Lit	eracy		ICT Literacy	Х	Life and	Caree	r Skills
8.1 Education	al Techn	olog	v: All students will use digi	tal to	ols to access, manage, e	evalu	ate, and synthesize
informatic	information in order to solve problems individually and collaborate and to create and communicate						
			knowled	dge.			
arithmetic.         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. <b>21<sup>st</sup> Century Themes Civic Literacy</b> Health Literacy         Global Awareness       X         Financial, Economic, Business, and Entrepreneurial Literacy       Civic Literacy         Health Literacy       Health Literacy         Creativity and Innovation       X       Critical Thinking and Problem Solving         Media Literacy       ICT Literacy       X       Life and Career Skills <b>8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate						Health Literacy Information Literacy r Skills ate, and synthesize I communicate	

Strand: A. Technology Operations	Content Statement:	Indicator:
and Concepts: Students	Understand and use technology	8.1.5.A.1 Select and use the
demonstrate a sound	systems.	appropriate digital tools and
understanding of technology		resources to accomplish a variety
concepts, systems and operations.		of tasks including solving
1 / 7 1		problems.

Pine Hill Public Schools							
Mathematics Curriculum							
Unit Title: Mul	tiply by Multiples of Ten		Unit #: 10				
Course or Grad	e Level: 3 <sup>rd</sup> Grade Math	Length of Time: 6 days					
Pacing	2017-2018						
8	Jan. 26 through Feb. 2						
	Daily Warm-up: Daily CC Review						
Essential	• How can you multiply on an open number l	ine?					
Questions	• How can you use properties to multiply by	multiples of 10?					
	• What is a rule for multiplying by a multiple	of 10?					
	• How can I use structure to multiply with mu	ultiples of 10?					
Content	• 10.1 Use an Open Number Line to Multiply	ý					
	• 10.2 Use Properties to Multiply						
	• 10.3 Multiply by Multiples of 10						
	• 10.4 Math Practices and Problem Solving: Look for and Use Structure						
Skills	• Use an open number line to find products when one factor is a multiple of 10						
	• Use properties of multiplication to find proc	ducts when one factor is a multipl	e of 10				
	• Use different strategies to find products who	en one factor is a multiple of 10	Coston in a numbral of 10				
Assessments	Eormative: Quick Check: Topic Test: Apec	dotal Records: Teacher Observati	on: Independent Practice:				
115505551101105	Problem Solving; Daily Common Core Rev	view	on, independent i factice,				
	• Summative: Placement Test; Mid-Year Be	nchmark; End of Year Benchmarl	ζ.				
Interventions /	Error Intervention						
differentiated	• Re-teach	A 1 1					
instruction	<ul> <li>Leveled Homework-Intervention, On Level</li> <li>Center Activities: On-level: Advanced</li> </ul>	, Advanced					
	<ul> <li>Strategic Intervention</li> </ul>						
	Special Needs						
Inter dissiplin	• ELL Strategies	mont alagaroom thomas					
Inter-disciplin	<ul> <li>Altering word problems to reflect cur</li> <li>Theme based center activities</li> </ul>	tent classroom themes					
Connections	Connecting reading strategies to prob	olems solving					
Lesson	PearsonRealize.com						
resources /	• Student and Teacher e-texts						
activities	• Smartboard						
	<ul> <li>Online personalized practice</li> <li>Online math tools</li> </ul>						
	<ul> <li>Online Today's challenge</li> </ul>						
	Online Solve and Share						
	Online Another Look Homework Video						
	<ul> <li>Visual Learning Animation</li> <li>Online Math Games</li> </ul>						
	- Omnie Maul Games						

<ul> <li>Animated Glossary</li> <li>Consumable student edition</li> <li>Teacher Edition</li> <li>Math and Science Activity (STEM)</li> <li>Teacher's Resource Masters</li> <li>Manipulatives</li> </ul>							
Grade or Conceptual Categ	ory (HS o	only): Third	Stand	ards for ivia	thematics		
Domain (name and #): Nun	ibers and	d Operations in Bas	e Ter			6 1	0 - 4 10 00
Use place value understanding and	<b>Э.NBI.A</b> (ед 9 х		t WNO stegie	s based on n	by multiples lace value a	5 01 10 nd nr	onerties of
properties of operations	operatio	ns.	itegie	s based on p	lace value a	na pi	oper des or
to perform multi-digit	-						
arithmetic.							
<ul> <li>Reason abstractly and a</li> <li>Construct viable argum</li> <li>Model with mathematic</li> <li>Use appropriate tools s</li> <li>Attend to precision.</li> <li>Look for and make use</li> <li>Look for and express resource</li> </ul>	<ul> <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>						
		<u>21<sup>st</sup> Century</u>	Ther	nes			
Global Awareness X	Fir Busines	nancial, Economic, ss, and Entrepreneurial Literacy	ancial, Economic, s, and Entrepreneurial Literacy		Health Literacy		
		<u>21<sup>st</sup> Centur</u>	<u>y Ski</u>	<u>lls</u>			
Creativity and X Innovation	Critical	Thinking and Problem Solving	Х	Communio Collabo	cation and oration		Information Literacy
Media Literacy		ICT Literacy	Х		Life and	Caree	r Skills
<b>8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.							
Strand: A. Technology Ope	<b>Content Statement:</b>			Indicator:			
and Concepts: Students	Understand and use technology			8.1.5.A.1 Select and use the			
demonstrate a sound		systems.			appropria	te dig	gital tools and
understanding of technolog concepts, systems and oper				of tasks in problems.	ic ac	ing solving	

Pine Hill Public Schools							
Mathematics Curriculum							
Unit Title: Use	<b>Operations with Whole Numbers to Solv</b>	e Problems	Unit #: 11				
Course or Grade Level: 3 <sup>rd</sup> Grade Math       Length of Time: 8 days							
Pacing	2017-2018						
8	Mid-year Assessment Feb. 5 and 6						
	Feb. 5 through Feb. 15						
	Daily Warm-up: Daily CC Review						
Essential	• How can you use diagrams to solve 2-step ]	problems?					
Questions	• How can you use diagrams to solve 2-step ]	problems?					
	• How can you solve 2-step problems?						
	• How can you critique the reasoning of othe	rs?					
Content	• 11.1 Solve 2-Step Word Problems: Additio	n and Subtraction					
	• 11.2 Solve 2-Step Word Problems: Multipl	ication and Division					
	• 11.3 Solve 2-Step Word Problems: All Ope	erations					
	• 11.4 Math Practices and Problem Solving: Critique Reasoning						
SI-:11a	• Drow diagrams and write equations to solv	a two aton word problems involvi	na addition and subtraction of				
SKIIIS	• Draw diagrams and write equations to solve two-step word problems involving addition and subtraction of whole numbers						
	• Draw diagrams and write equations to solve	e two-step word problems involvi	ng multiplication and division				
	of whole numbers						
	• Examine relationships between quantities in apply the operations needed to find the apsi	n a two-step word problem by wri	ting equations. Choose and				
	<ul> <li>Critique the reasoning of others by asking c</li> </ul>	uestions. identifving mistakes, ar	d providing suggestions for				
	improvement	1	F. C.				
Assessments	• Formative: Quick Check; Topic Test; Anec	cdotal Records; Teacher Observati	on; Independent Practice;				
	Problem Solving; Daily Common Core Rev	view					
	• Summative: Placement Test; Mid-Year Be	enchmark; End of Year Benchmarl	Κ.				
Interventions /	• Error Intervention						
differentiated	<ul> <li>Ke-teach</li> <li>Leveled Homework-Intervention On Level</li> </ul>	Advanced					
instruction	<ul> <li>Center Activities: On-level; Advanced</li> </ul>	i, Auvanceu					
	Strategic Intervention						
	Special Needs						
Inton dissiniin	• ELL Strategies	rrant alaggroom themag					
arv	<ul> <li>Theme based center activities</li> </ul>						
Connections	<ul> <li>Connecting reading strategies to prob</li> </ul>	olems solving					
Lesson	PearsonRealize.com						
resources /	<ul> <li>Student and Teacher e-texts</li> </ul>						
activities	• Smartboard						
	Online personalized practice						
	<ul> <li>Unline math tools</li> <li>Online Today's challenge</li> </ul>						
	• Omme roday's challenge						

<ul> <li>Online Solve and Share</li> <li>Online Another Look Homework Video</li> <li>Visual Learning Animation</li> <li>Online Math Games</li> <li>Animated Glossary</li> <li>Consumable student edition</li> <li>Teacher Edition</li> <li>Math and Science Activity (STEM)</li> <li>Teacher's Resource Masters</li> <li>Manipulatives</li> </ul> New Jersey Student Learning Standards for Mathematics Grade or Conceptual Category (HS only): Third									
Domain	(name and #): (	Opera	ations a	nd Algebraic Think	king 3	.OA			
Solve pr the four identify patterns	roblems involvin c operations, and and explain s in arithmetic.	g 3 I t	3.OA.D.3 problem the reaso includin	8: Solve two-step wor s using equations wit onableness of answers g rounding.	d pro h a let s usin	blems using tter standing g mental cor	the four op g for the un nputation a	eratio know nd es	ons. Represent these n quantity. Assess timation strategies
	<ul> <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>								
			1	<u>21<sup>st</sup> Century</u>	Then	<u>nes</u>		Γ	r
G	lobal Awareness	Х	Fin Busines	ancial, Economic, s, and Entrepreneurial Literacy		Civic L	iteracy		Health Literacy
				<u>21<sup>st</sup> Centur</u>	y Ski	<u>lls</u>			
	Creativity and Innovation	Х	Critical	Thinking and Problem Solving	X	Communio Collabo	cation and pration	Caree	Information Literacy
<b>Q1E</b> J		nolos	A 11 -	tudanta will use diai		als to acces		ovolu	ata and aunthosiza
<b><u>8.1 Educational Technology:</u></b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.									
Strand: A. Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.			Content Statement: Understand and use technology systems.		Indicator: 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.				

Pine Hill Public Schools								
Mathematics Curriculum								
Unit Title: Und	Unit Title: Understand Fractions as NumbersUnit #: 12							
Course or Grade Level: 3rd Grade MathLength of Time: 10 days								
Pacing	ng 2017-2018							
	Feb. 20 through Mar. 5							
	Daily Warm-up: Daily CC Review							
Essential	• How can you name the equal parts of a who	ole?						
Questions	• How can you show and name parts of a reg	ion?						
	• How can you use a fractional part to find a	whole?						
	• How can you record fractions on a number	line?						
	• How can you use a number line to represen	t fractions greater than 1?						
	• How can you make and use line plots?							
	• How can you measure lengths and use line	plots to show the data?						
	• How can you make sense of a problem and	persevere in solving it?						
Content	ntent • 12.1 Divide Regions into Equal Parts							
	• 12.2 Fractions and Regions							
	• 12.3 Understand the Whole							
	• 12.4 Number Line: Fractions Less Than 1							
	• 12.5 Number Line: Fractions Greater Than	1						
	• 12.6 Line Plots and Length							
	• 12.7 More Line Plots and Length							
	• 12.8 Math Practices and Problem Solving:	Make Sense and Persevere						
Skills	<ul> <li>Understand how to read and write unit fraction to represent multiple copies.</li> </ul>	tions for equal-size parts of a regi-	on					
	<ul> <li>Determine and draw the whole (unit) given</li> </ul>	one part (unit fraction)						
	Represent fractions on a number line	···· F ()						
	• Represent fractions greater than 1 on a num	iber line						
	• Measure length to the nearest fourth inch and	nd show the data on a line plot						
	• Measure length to the nearest half inch and	show the data on a line plot						
Assessments	<ul> <li>Determine when a problem has either extra</li> <li>Formative: Oviale Choole: Topia Tost: Apac</li> </ul>	of missing mormation	on: Indonandant Practica:					
Assessments	<ul> <li>Formative: Quick Check, Topic Test, Anec Problem Solving: Daily Common Core Rev</li> </ul>	view	on, independent Flactice,					
	Summative: Placement Test: Mid-Year Be	nchmark: End of Year Benchmar	ξ.					
<b>T</b> 4 4* /	Emer Internetion	moninari, Ena or rear Beneminari						
linterventions /	Error Intervention     Re-teach							
instruction	<ul> <li>Leveled Homework-Intervention. On Level</li> </ul>	l. Advanced						
mstruction	• Center Activities: On-level; Advanced	,						
	Strategic Intervention							
	• Special Needs							
	ELL Strategies							

Inter-disciplin	Altering word problems to reflect current classroom themes							
ary	Theme based center activities							
Connections	Connecting reading strategies to problems solving							
Lesson	PearsonR	• PearsonRealize.com						
resources /	<ul> <li>Student a</li> </ul>	Student and Teacher e-texts						
activities	Student and reacher e-texts     Smartboard							
activities	• Online pe	ersonalized practice						
	• Online m	ath tools						
	• Online To	oday's challenge						
	Online Set	plve and Share						
	• Online A	nother Look Homework Video						
	• Visual Le	earning Animation						
	• Online M	lath Games						
	• Animated	d Glossary						
	<ul> <li>Consumation</li> <li>Teacher I</li> </ul>	able student edition						
	<ul> <li>Teacher f</li> <li>Math and</li> </ul>	Califon Science Activity (STEM)						
	<ul> <li>Treacher's</li> </ul>	Resource Masters						
	Manipula	tives						
	p	New Jersev Student Learning Standards for Mathematics						
Grade or Conce	entual Categ	ory (HS only): Third						
	pruur ourog							
Domain (name a	and #): Nun	nbers and Operations: Fractions 3.NF						
Cluster:		<b>3.NF.A.1:</b> Understand a fraction 1/b as the quantity formed by 1 part when a whole						
Develop underst	tanding of	is partitioned into b equal parts; understand a fraction a/b as the quantity formed						
fractions as nun	nbers.	by a parts of size 1/b.						
		3.NF.A.2 a & b: Understand a fraction as a number on the number line; represent						
		fractions on a number line diagram.						
		a. Represent a fraction 1/b on a number line diagram by defining the interval						
		from 0 to 1 as the whole and nartitioning it into begual narts. Recognize that each						
		nort has size 1/b and that the endnoint of the part based at 0 locates the number 1/b						
		on the number line						
		b Represent a fraction a/b on a number line diagram by marking off a lengths 1/						
		from 0. Recognize that the resulting interval has size a/h and that its endnoint						
		locates the number a/b on the number line						
		iocates the number a/b on the number line.						
		3 NF A 3c. Explain aquivalance of fractions in special cases, and compare fractions						
		by reasoning about their size. Express whole numbers as frequences and reasoning						
		by reasoning about then size. Express whole numbers as machines, and recognize						
		Fractions that are equivalent to whole numbers. Examples: Express 5 in the form 5 $-2/1$ , we can be that $C/1 - C$ be sets $A/A$ and 1 at the same point of a number line						
-5/1; recognize that $0/1 = 0$ ; locate 4/4 and 1 at the same point of a number in diagram								
Domoir (		ulagram.						
Domain (name a	and #): Mea	surement and Data 5.MD						
Cluster:		3.MD.B.4: Generate measurement data by measuring lengths using rulers marked						
Represent and i	nterpret	with halves and fourths of an inch. Show the data by making a line plot. where the						
data		horizontal scale is marked off in appropriate units— whole numbers, halves, or						
		quarters.						
		June et al.						

Pine Hill Public Schools								
Mathematics Curriculum								
Unit Title: Frac	Unit Title: Fraction Equivalence and ComparisonUnit #: 13							
Course or Grad	I							
Pacing	2017-2018							
	Mar. 6 through Mar. 20							
	Daily Warm-up: Daily CC Review							
Essential	• How can different fractions name the same part of a whole?							
Questions	• How can you use number lines to find equi	valent fractions?						
	• How can you compare fractions with the sa	ime denominator?						
	• How can you compare fractions with the sa	ime numerator?						
	• How can benchmark numbers be used to co	ompare fractions?						
	• How can you compare fractions using a num	mber line?						
	<ul> <li>How can you use fractions names to repres</li> <li>How can you construct arguments?</li> </ul>	ent whole numbers?						
	• How can you construct arguments?							
~								
Content								
• 13.2 Equivalent Fractions: Use the Number Line								
• 13.3 Use Models to Compare Fractions: Same Denominator								
• 13.4 Use Models to Compare Fractions: Same Numerator								
	• 13.5 Compare Fractions: Use Benchmarks							
	• 13.6 Compare Fractions: Use the Number	Line						
	• 13.7 Whole Numbers and Fractions							
	• 13.8 Math Practices and Problem Solving:	Construct Arguments						
Skills	• Find equivalent fractions that name the sam	ne part of a whole						
	• Represent equivalent fractions on a number	r line						
	• Use models such as fraction strips to compa- denominator	are fractions that refer to the same	e whole and have the same					
	<ul> <li>Use models such as fraction strips to compare</li> </ul>	are fractions that refer to the same	e whole and have the same					
	numerator							
	• Use benchmark numbers to compare fraction	ons						
	<ul> <li>Use a number line to compare fractions</li> <li>Use fractions names to represent whole number</li> </ul>	nhers						
	<ul> <li>Construct math arguments using fractions</li> </ul>	noeis						
Assessments	• Formative: Quick Check; Topic Test; Anec	cdotal Records; Teacher Observat	ion; Independent Practice;					
	Problem Solving; Daily Common Core Rev	view						
	• Summative: Placement Test; Mid-Year Be	enchmark; End of Year Benchmar	k.					
Interventions /	Error Intervention							
differentiated	• Re-teach	1 A decoursed						
instruction	<ul> <li>Leveled Homework-Intervention, On Leve</li> <li>Center Activities: On-level: Advanced</li> </ul>	i, Advanced						
	Strategic Intervention							
	• Special Needs							
	• ELL Strategies							

Inter-disciplin	• Al	tering word problems to reflect current classroom themes					
ary	Theme based center activities						
Connections	Connecting reading strategies to problems solving						
Lesson resources / activities	<ul> <li>PearsonRealize.com</li> <li>Student and Teacher e-texts</li> <li>Smartboard</li> <li>Online personalized practice</li> <li>Online math tools</li> <li>Online Today's challenge</li> <li>Online Solve and Share</li> <li>Online Another Look Homework Video</li> <li>Visual Learning Animation</li> <li>Online Math Games</li> <li>Animated Glossary</li> <li>Consumable student edition</li> <li>Teacher Edition</li> <li>Math and Science Activity (STEM)</li> <li>Teacher's Resource Masters</li> </ul>						
	Manipula	atives					
		New Jersey Student Learning Standards for Mathematics					
Grade or Conce	ptual Categ	gory (HS only): Third					
Domain (name a	and #): Nun	nbers and Operations: Fractions 3.NF					
Cluster:		3.A.NF.2 a & b: Understand a fraction as a number on the number line; represent					
Develop underst	tanding of	fractions on a number line diagram.					
fractions as numbers.		<ul> <li>a. Represent a fraction 1/b on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line.</li> <li>b. Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.</li> </ul>					
		<b>3.NF.A.3c:</b> Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3 = 3/1$ ; recognize that $6/1 = 6$ ; locate $4/4$ and 1 at the same point of a number line diagram.					
		3.NF.A.3.d: Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. 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 >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.					

## 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.

<u>21<sup>st</sup> Century Themes</u>									
	Global Awareness	X	Fir Busines	nancial, Economic, ss, and Entrepreneurial Literacy		Civic L	iteracy		Health Literacy
	21 <sup>st</sup> Century Skills								
	Creativity and Innovation	Х	Critical	Thinking and Problem Solving	X	Communic Collabo	ation and		Information Literacy
	Media Literacy			ICT Literacy	Х		Life and	Career	r Skills
<b>8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.									
Strand: A. Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.			Content Statement: Understand and use systems.	e tech	nology	Indicator: 8.1.5.A.1 appropriat resources of tasks in problems.	Selecte dig to action to action	et and use the ital tools and complish a variety ing solving	

Pine Hill Public Schools					
Mathematics Curriculum					
Unit Title:Solve Time, Capacity and Mass ProblemsUnit #: 14					
Course or Grad	e Level: 3 <sup>rd</sup> Grade Math	Length of Time: 11 days			
Pacing	2017-2018				
	Mar. 21 through April 12				
	Daily Warm up: Daily CC Paviay				
Fssential	• How do you tell time to the pearest minute	)			
Ouestions	<ul> <li>How can you find elansed time?</li> </ul>	1			
<b>X</b>	• How can you add or subtract time intervals?				
	<ul> <li>What metric units are used to estimate and</li> </ul>	measure liquid volume?			
	<ul> <li>How do you measure capacity?</li> </ul>	incubule inquite volume.			
	• How can you use reasoning to estimate mas	55?			
	• How do you measure mass?				
	• How do you use drawings to solve problem	us?			
	• How can you use reasoning to solve proble	ms?			
Content	• 14.1 Time to the Minute				
	<ul> <li>14.1 Time to the Minute</li> <li>14.2 Units of Time: Measure Flansed Time</li> </ul>	<b>x</b>			
	<ul> <li>14.3 Units of Time: Solve Word Problems</li> </ul>				
	<ul> <li>14.4 Estimate Liquid Volume</li> </ul>				
	• 14.5 Measure Liquid Volume				
	• 14.6 Estimate Mass				
	• 14.7 Measure Mass				
	• 14.8 Solve Word Problems Involving Mass	and Liquid Volume			
	• 14.9 Math Practices and Problem Solving:	Reasoning			
Skills	<ul> <li>Show and tell time to the nearest minute us</li> </ul>	ing analog and digital clocks			
Skiiis	<ul> <li>Tell and write time to the nearest minute and</li> </ul>	d measure time intervals in minute	es		
	• Solve word problems involving addition an	d subtraction to measure quantitie	s of time		
	• Use standard units to estimate liquid volum	e			
	<ul> <li>Use standard units to estimate liquid volum</li> <li>Use standard units to estimate the masses of</li> </ul>	e f solid objects			
	<ul> <li>Use a pan balance with metric weights to m</li> </ul>	neasure the mass of objects in gran	ns and kilograms		
	• Use pictures to help solve problems about n	nass and volume	C C		
	• Make sense of quantities and relationships	in problems			
Assessments	• Formative: Quick Check; Topic Test; Anec	cdotal Records; Teacher Observati	on; Independent Practice;		
	Problem Solving; Daily Common Core Rev	view			
	• Summative: Placement lest; Mid-Year Be	encnmark; End of Year Benchmark	ζ.		
Interventions /	Error Intervention				
differentiated	<ul> <li>Ke-teach</li> <li>Leveled Homework-Intervention On Level</li> </ul>	Advanced			
instruction	<ul> <li>Leveled Homework-Intervention, On Level, Advanced</li> <li>Center Activities: On-level: Advanced</li> </ul>				
	Strategic Intervention				

	Special Needs					
	• ELL Strategies					
Inter-disciplin	<ul> <li>Altering word problems to reflect current classroom themes</li> </ul>					
ary	Theme based center activities					
Connections	• Co	nnecting reading strategies to problems solving				
Lesson	PearsonRealize.com					
resources /	• Student and Teacher e-texts					
activities	• Smartboard					
	• Online pe	ersonalized practice				
	• Online m	ath tools				
	• Online To	oday's challenge				
	• Online So	blve and Share				
	• Online A	nother Look Homework Video				
	• Visual Le	Carning Animation				
	Online Math Games     Animeted Classery					
	Annualed Glossary     Consumple student edition					
	Consumatic student edition     Teacher Edition					
	• Math and Science Activity (STEM)					
	<ul> <li>Teacher's</li> </ul>	Resource Masters				
	Manipula	tives				
New Jersey Student Learning Standards for Mathematics						
Grade or Conceptual Category (HS only): Third						
Domain (name a	and #): Mea	surement and Data 3.MD				
Cluster:		<b>3.MD.A.1:</b> Tell and write time to the nearest minute and measure time intervals in				
Solve problems	involving	minutes. Solve word problems involving addition and subtraction of time intervals				
measurement and		in minutes, e.g., by representing the problem on a number line diagram.				
estimation of intervals of						
time, liquid volumes, and		3.MD.A.2: Measure and estimate liquid volumes and masses of objects using				
masses of objects		standard units of grams (g) kilograms (kg) and liters (1) Add subtract multiply				
musses of objects.		or divide to solve one step word problems involving masses or volumes that are				
		given in the same units a g, by using drawings (such as a backer with a				
		given in the same units, e.g., by using unawings (such as a beaker with a				
		measurement scale) to represent the problem.				

Pine Hill Public Schools				
Mathematics Curriculum				
Unit Title: Attributes of Two-Dimensional ShapesUnit #: 15				
Course or Grad	e Level: 3 <sup>rd</sup> Grade Math	Length of Time: 6 days		
Date Created: J	uly 2017	<b>BOE Approval Date:</b>		
Pacing	2017-2018			
	April 13 through April 20 PAPCC Testing Week of April 16			
	rance testing week of April 10			
	Daily Warm-up: Daily CC Review			
Essential	• What are some attributes of quadrilaterals?			
Questions	• How can you describe different groups of s	hapes?		
	• How can you analyze and compare shapes?			
	• How can you be precise when solving math	n problems?		
Content	• 15.1 Describe Quadrilaterals			
	• 15.2 Classify Shapes			
	• 15.3 Analyze and Compare Quadrilaterals	D		
	• 15.4 Math Practices and Problem Solving:	Precision		
Skills	• Identify quadrilaterals and use attributes to	describe them		
	<ul> <li>Classify shapes according to their attributes</li> <li>Analyze and compare guadrilaterals and gr</li> </ul>	S oun them by their attributes		
	<ul> <li>Solve math problems precisely, efficiently,</li> </ul>	and accurately by using appropriate	e tools and mathematics	
	vocabulary			
Assessments	• Formative: Quick Check; Topic Test; Anec	cdotal Records; Teacher Observatio	n; Independent Practice;	
	• Summative: Placement Test: Mid-Year Be	enchmark: End of Year Benchmark		
Interventions /	Frror Intervention			
differentiated	• Re-teach			
instruction	Leveled Homework-Intervention, On Level	l, Advanced		
	Strategic Intervention			
	• Special Needs			
	• ELL Strategies	mont alagana any thomas		
Inter-disciplin	<ul> <li>Altering word problems to reflect cu</li> <li>Theme based center activities</li> </ul>	rrent classroom themes		
Connections	<ul> <li>Connecting reading strategies to prol</li> </ul>	olems solving		
Lesson	PearsonRealize.com			
resources /	• Student and Teacher e-texts			
activities	<ul> <li>Smartboard</li> <li>Online personalized practice</li> </ul>			
	<ul> <li>Online math tools</li> </ul>			
	• Online Today's challenge			
	Online Solve and Share     Online Another Look Homework Video			
Skills         Assessments         Interventions /         differentiated         instruction         Inter-disciplin         ary         Connections         Lesson         resources /         activities	<ul> <li>15.3 Analyze and Compare Quadrilaterals</li> <li>15.4 Math Practices and Problem Solving:</li> <li>Identify quadrilaterals and use attributes to</li> <li>Classify shapes according to their attributes</li> <li>Analyze and compare quadrilaterals and gr</li> <li>Solve math problems precisely, efficiently, vocabulary</li> <li>Formative: Quick Check; Topic Test; Anea Problem Solving; Daily Common Core Rev</li> <li>Summative: Placement Test; Mid-Year Be</li> <li>Error Intervention</li> <li>Re-teach</li> <li>Leveled Homework-Intervention, On Leve</li> <li>Center Activities: On-level; Advanced</li> <li>Strategic Intervention</li> <li>Special Needs</li> <li>ELL Strategies</li> <li>Altering word problems to reflect cu</li> <li>Theme based center activities</li> <li>Connecting reading strategies to prof</li> <li>PearsonRealize.com</li> <li>Student and Teacher e-texts</li> <li>Smartboard</li> <li>Online personalized practice</li> <li>Online Today's challenge</li> <li>Online Solve and Share</li> <li>Online Another Look Homework Video</li> </ul>	Precision describe them soup them by their attributes and accurately by using appropriate cdotal Records; Teacher Observation view enchmark; End of Year Benchmark. I, Advanced rrent classroom themes blems solving	e tools and mathematics n; Independent Practice;	

Visual Learning Animation				
• Online M	1ath Games			
Animate	d Glossary			
Consum	Consumable student edition			
Teacher I	• Teacher Edition			
Math and	• Math and Science Activity (STEM)			
• Teacher's Resource Masters				
Manipulatives				
New Jersey Student Learning Standards for Mathematics				
Grade or Conceptual Category (HS only): Third				
Domain (name and #): Geometry 3.G				
Cluster:	3.G.A.1: Understand that shapes in different categories (e.g., rhombuses,			
Reason with shapes and	rectangles, and others) may share attributes (e.g., having four sides), and that the			
their attributes.	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.			
	enumpres of quantitationals that at hot second to any of these subcategories.			

Pine Hill Public Schools				
Mathematics Curriculum				
Unit Title: Solving Perimeter ProblemsUnit #: 16				
Course or Grad	e Level: 3 <sup>rd</sup> Grade Math	Length of Time: 8 days		
Pacing	2017-2018			
	April 23 through May 2			
	Daily Warm-up: Daily CC Review			
Essential	• How do you find perimeter?			
Questions	• How can you find the perimeters of common shapes?			
	• How can you find an unknown side length from the perimeter?			
	• Can rectangles have different areas but the same perimeter?			
	• Can rectangles have the same areas but diff	erent perimeters?		
	• How can you use reasoning to solve proble	ms?		
Content	• 16.1 Understand Perimeter			
	<ul> <li>16.2 Perimeter of Common Shapes</li> </ul>			
	• 16 3 Perimeter and Unknown Side Lengths			
	<ul> <li>16.4 Same Perimeter Different Area</li> </ul>	·		
	• 16.5 Same Area Different Perimeter			
	<ul> <li>16.6 Math Practices and Problem Solving:</li> </ul>	Reasoning		
Skills	• Find the perimeter of different polygons			
	• Find the perimeter of different polygons wi	th common shapes		
	• Use the given sides of a polygon and the kr	how perimeter to find the unknown side length		
	<ul> <li>Understand the relationship of shapes with</li> </ul>	the same area and different perimeters		
	<ul> <li>Understand the relationship of shapes with</li> <li>Understand the relationship between number</li> </ul>	ers in order to simplify and solve problems involving perimeter		
Assessments	• Formative: Quick Check; Topic Test; Anec	cdotal Records; Teacher Observation; Independent Practice;		
	Problem Solving; Daily Common Core Rev	view		
	• Summative: Placement Test; Mid-Year Be	enchmark; End of Year Benchmark.		
Interventions /	Error Intervention			
differentiated	• Re-teach			
instruction	Leveled Homework-Intervention, On Level     Conter Activities: On level: Advanced	l, Advanced		
	<ul> <li>Center Activities: On-level, Advanced</li> <li>Strategic Intervention</li> </ul>			
	<ul> <li>Special Needs</li> </ul>			
	• ELL Strategies			
Inter-disciplin	Altering word problems to reflect cut	rrent classroom themes		
ary	Theme based center activities			
Connections	<ul> <li>Connecting reading strategies to prol</li> </ul>	plems solving		
Lesson	PearsonRealize.com			
resources /	• Student and Teacher e-texts			
activities	Smartboard     Online personalized superior			
	<ul> <li>Online personalized practice</li> <li>Online math tools</li> </ul>			
Lesson resources / activities	<ul> <li>PearsonRealize.com</li> <li>Student and Teacher e-texts</li> <li>Smartboard</li> <li>Online personalized practice</li> <li>Online math tools</li> </ul>			

• Online To	oday's challenge			
• Online So	olve and Share			
Online Another Look Homework Video				
Visual Learning Animation				
• Online M	lath Games			
• Animated	• Animated Glossary			
Consuma	able student edition			
• Teacher H	Edition			
Math and	Science Activity (STEM)			
• Teacher's	s Resource Masters			
Manipula	tives			
· · · · · · · · · · · · · · · · · · ·	New Jersey Student Learning Standards for Mathematics			
Grade or Conceptual Category (HS only): Third				
Domain (name and #): Measurement and Data 3.MD				
Cluster:				
Geometric measurement:	<b>3.MD.C.7b:</b> Multiply side lengths to find areas of rectangles with whole number			
understand concepts of	side lengths in the context of solving real world and mathematical problems, and			
area and relate area to	ranrasant whole number products as rectangular areas in mathematical reasoning			
area and relate area to	represent whole-number products as rectangular areas in mathematical reasoning.			
multiplication and to				
addition				
Caomatric magsuramant.	3 MD D 8: Solve real world and mathematical problems involving perimeters of			
Geometric measurement.	5. WID. D.o. Solve real world and mathematical problems involving perimeters of			
recognize perimeter as an	polygons, including finding the perimeter given the side lengths, finding an			
attribute of plane figures	unknown side length, and exhibiting rectangles with the same perimeter and			
and distinguish between	different areas or with the same area and different perimeters.			
linear and area measures				

Pine Hill Public Schools				
Mathematics Curriculum				
Unit Title: Step Up to 4th Grade LessonsUnit #:				
Course or Gr	ade Level: 3 <sup>rd</sup> Grade Math	Length of Time: 21 days		
Date Created	: July 2017	BOE Approval Date:		
Pacing	2017-2018		-	
	May 3 through June 1			
	End of Vear Assessment: Week of June 4			
	End of feat Assessment. Week of built 4			
	Daily Warm-up: Daily CC Review			
Essential	• How are the digits in a multi-digit number	related to each other?		
Questions	• How can you multiply by multiples of 10,	100 and 1,000?		
	• How can you multiply by multiples of 10?	1 40		
How can you use an array or an area model to multiply?				
<ul> <li>After dividing, what do you do with the remainders?</li> <li>How can you use tools to add fractions?</li> </ul>				
	<ul> <li>How can you represent a fraction in a varie</li> </ul>	ety of ways?		
	• What are some common geometric terms?	ty of ways!		
	• What is the unit used to measure angles?			
	<ul> <li>How can you describe pairs of lines?</li> </ul>			
	for the former of the former o			
Content	Place Value Relationships			
	<ul> <li>Mental Math: Multiply by Multiples of 10</li> </ul>	100 and 1 000		
	<ul> <li>Mental Math: Multiply by Multiples of 10</li> <li>Mental Math: Multiply Multiples of 10</li> </ul>	, 100 und 1,000		
	<ul> <li>Use Models to Multiply 2-digit Numbers h</li> </ul>	ov Multiples of 10		
	• Interpret Remainders			
	Model Addition of Fractions			
	• Decompose Fractions			
	• Lines, Rays and Angles			
	• Understand Angles and Unit Angles			
	• Lines			
Skills	Recognize the relationship between adjace	nt digits in a multi-digit number		
	• Multiply multiples of 10, 100 and 1,000 us	se mental math and place value strateg	jies	
	• Use mental math strategies to multiply 2-d	igit by 2-digit multiples of ten		
	• Use models and properties of operations to	multiply 2-digit numbers by multiples	s of ten	
	<ul> <li>Solve division problems and interpret remains</li> <li>Use fraction strips and number lines to add</li> </ul>	inders		
	<ul> <li>Decompose a fraction or a mixed number in</li> </ul>	nto a sum of fractions in more than on	e wav	
	• Recognize and draw lines, rays, and angles	with different measures		
	• Find the measure of an angle that turns three	bugh a fraction of a circle		
	• Draw and identify perpendicular, parallel.	and intersecting lines		

Interventions /       • Error Intervention         differentiated instruction       • Error Intervention         • Leveled Homework-Intervention, On Level, Advanced         • Center Activities: On-level; Advanced         • Strategic Intervention         • Special Needs         • ELL Strategies         Inter-disciplin ary         • Connections         • PearsonRealize.com         • Student and Teacher e-texts         • Student and Teacher e-texts         • Sumatiovard         • Online personalized practice         • Online Today's challenge         • Online Today's challenge					
Interventions / differentiated instruction       • Error Intervention • Re-teach • Leveled Homework-Intervention, On Level, Advanced • Center Activities: On-level; Advanced • Strategic Intervention • Special Needs • ELL Strategies         Inter-disciplin ary Connections       • Altering word problems to reflect current classroom themes • Theme based center activities • Connecting reading strategies to problems solving         Lesson resources / activities       • PearsonRealize.com • Student and Teacher e-texts • Smartboard • Online personalized practice • Online math tools • Online Today's challenge • Online Solve and Share					
differentiated       • Re-teach         instruction       • Leveled Homework-Intervention, On Level, Advanced         • Center Activities: On-level; Advanced       • Strategic Intervention         • Special Needs       • ELL Strategies         Inter-disciplin       • Altering word problems to reflect current classroom themes         ary       • Connecting reading strategies to problems solving         Lesson       • PearsonRealize.com         * Student and Teacher e-texts       • Smartboard         • Online personalized practice       • Online Today's challenge         • Online Solve and Share       • Online Solve and Share					
instruction       • Leveled Homework-Intervention, On Level, Advanced         • Center Activities: On-level; Advanced         • Strategic Intervention         • Special Needs         • ELL Strategies         Inter-disciplin         ary         Connections         • Center activities         • Online personalized practice         • Online math tools         • Online Today's challenge         • Online Solve and Share					
<ul> <li>Center Activities: On-level; Advanced</li> <li>Strategic Intervention</li> <li>Special Needs</li> <li>ELL Strategies</li> <li>Inter-disciplin ary</li> <li>Altering word problems to reflect current classroom themes</li> <li>Theme based center activities</li> <li>Connections</li> <li>PearsonRealize.com</li> <li>Student and Teacher e-texts</li> <li>Smartboard</li> <li>Online personalized practice</li> <li>Online math tools</li> <li>Online Today's challenge</li> <li>Online Solve and Share</li> </ul>					
<ul> <li>Strategic Intervention</li> <li>Special Needs</li> <li>ELL Strategies</li> <li>Inter-disciplin ary</li> <li>Altering word problems to reflect current classroom themes</li> <li>Theme based center activities</li> <li>Connections</li> <li>Connecting reading strategies to problems solving</li> <li>Lesson</li> <li>PearsonRealize.com</li> <li>Student and Teacher e-texts</li> <li>Smartboard</li> <li>Online personalized practice</li> <li>Online math tools</li> <li>Online Today's challenge</li> <li>Online Solve and Share</li> </ul>					
<ul> <li>Special Needs         <ul> <li>ELL Strategies</li> </ul> </li> <li>Inter-disciplin         <ul> <li>Altering word problems to reflect current classroom themes</li> <li>Theme based center activities</li> <li>Connections</li> <li>Connecting reading strategies to problems solving</li> </ul> </li> <li>Lesson         <ul> <li>PearsonRealize.com</li> <li>Student and Teacher e-texts</li> <li>Smartboard</li> <li>Online personalized practice</li> <li>Online math tools</li> <li>Online Today's challenge</li> <li>Online Solve and Share</li> </ul> </li> </ul>					
Inter-disciplin ary Connections       • Altering word problems to reflect current classroom themes • Theme based center activities • Connecting reading strategies to problems solving         Lesson resources / activities       • PearsonRealize.com • Student and Teacher e-texts • Smartboard • Online personalized practice • Online math tools • Online Today's challenge • Online Solve and Share					
ary       • Theme based center activities         Connections       • Connecting reading strategies to problems solving         Lesson       • PearsonRealize.com         resources / activities       • Student and Teacher e-texts         • Smartboard       • Online personalized practice         • Online math tools       • Online Today's challenge         • Online Solve and Share					
Connections       • Connecting reading strategies to problems solving         Lesson resources / activities       • PearsonRealize.com         • Student and Teacher e-texts         • Smartboard         • Online personalized practice         • Online math tools         • Online Today's challenge         • Online Solve and Share					
Lesson       • PearsonRealize.com         resources /       • Student and Teacher e-texts         activities       • Smartboard         • Online personalized practice       • Online math tools         • Online Today's challenge       • Online Solve and Share					
Lesson       • PearsonRealize.com         resources / activities       • Student and Teacher e-texts         • Smartboard       • Online personalized practice         • Online math tools       • Online Today's challenge         • Online Solve and Share       • Online Solve and Share					
resources /       • Student and reacher creats         activities       • Smartboard         • Online personalized practice         • Online math tools         • Online Today's challenge         • Online Solve and Share					
activities     • Sinarbound       • Online personalized practice       • Online math tools       • Online Today's challenge       • Online Solve and Share					
<ul> <li>Online math tools</li> <li>Online Today's challenge</li> <li>Online Solve and Share</li> </ul>					
<ul> <li>Online Today's challenge</li> <li>Online Solve and Share</li> </ul>					
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• Animated Glossary					
Consumable student edition					
• Teacher Edition					
• Math and Science Activity (STEM)					
• Teacher's Resource Masters					
Manipulatives     New Jersey Student Learning Standards for Mathematics					
Crade or Concentual Category (HS only): Fourth					
Grade of Conceptual Category (115 only). Fourth					
Domain (name and #): Measurement and Data 4.MD					
Cluster:					
Geometric measurement: 4.MD.C.5: Recognize angles as geometric shapes that are formed wherever two rays					
understand concepts of share a common endpoint, and understand concepts of angle measurement					
angle and measure angles					
4.MD.C.5a: An angle is measured with reference to a circle with its center at the					
common endpoint of the rays, by considering the fraction of the circular arc					
between the points where the two rays intersect the circle. An angle that turns					
through 1/360 of a circle is called a "one-degree angle," and can be used to measure					
angles.					
Domain (name and #): Number and Operations in Base Ten 4.NBT					
Cluster:					
Generalize place value 4.NBT.A.1: Recognize that in a multi-digit whole number, a digit in one place					
understanding for represents ten times what it represents in the place to its right. For example					
recognize that $700 \div 70 = 10$ by applying concepts of place value and division					

multi-digit whole	4.NBT.A.2: Read and write multi-digit whole numbers using base-ten numerals,			
numbers	number names, and expanded form. Compare two multi-digit numbers based on			
	meanings of the digits in each place, using >, =, and < symbols to record the results			
	of comparisons.			
	•			
	4.NBT.B.5: Multiply a whole number of up to four digits by a one-digit whole			
	number, and multiply two two-digit numbers, using strategies based on place value			
Use place value	and the properties of operations. Illustrate and explain the calculation by using			
understanding and	equations, rectangular arrays, and/or area models.			
properties of operations				
to perform multi-digit	4.NBT.B.6: Find whole-number quotients and remainders with up to four-digit			
arithmetic	dividends and one-digit divisors, using strategies based on place value, the			
	properties of operations, and/or the relationship between multiplication and			
	division. Illustrate and explain the calculation by using equations, rectangular			
	arrays, and/or area models.			
Domain (name and #): Op	erations and Algebraic Thinking 4.OA			
Cluster:				
Use the four operations	4.OA.A.3: Solve multisten word problems posed with whole numbers and having			
with whole numbers to	whole-number answers using the four operations, including problems in which			
solve problems	remainders must be interpreted. Represent these problems using equations with a			
F	letter standing for the unknown quantity. Assess the reasonableness of answers			
	using mental computation and estimation strategies including rounding.			
Domain (name and #): Numbers and Operations- Fractions 4 NF				
Cluster				
Build fractions from unit	4 NF R 3b: Understand a fraction $a/b$ with $a > 1$ as a sum of fractions $1/b$			
fractions by applying and	Decompose a fraction into a sum of fractions with the same denominator in more			
extending previous	than one way recording each decomposition by an equation Justify			
understandings of	decompositions e.g. by using a visual fraction model <i>Examples</i> : $3/8 = 1/8 + 1/8 + 1/8$			
operations on whole	$1/8 \cdot 3/8 = 1/8 + 2/8 \cdot 2 \cdot 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$			
numbers	1/0, 5/0 1/0 · 2/0, 2 1/0 1 · 1 · 1/0 0/0 · 0/0 · 1/0.			
Domain (name and #): Coometry A C				
Clustor				
Cluster: Draw and identify lines	ACA 1. Draw points lines line segments years angles (wight couts abture) and			
and angles and classific	4.G.A.1: Draw points, nnes, nne segments, rays, angles (right, acute, obtuse), and nonnondicular and nonallal lines. Identify there in two dimensional formers			
and angles, and classify	perpendicular and parallel lines. Identify these in two-dimensional figures.			
snapes by properties of				
their lines and angles.				