

Pine Hill Public Schools Curriculum

Content Area:	Mathematics		
Course Title/ Grade Level:	Grade 3		
Unit 1:	Understand Multiplication and Division of Whole Numbers	Duration:	8 days
Unit 2:	Multiplication Facts: Use Patterns	Duration:	8 days
Unit 3:	Apply Properties: Multiplication Facts for 3, 4, 6, 7, 8	Duration:	10 days
Unit 4:	Use Multiplication to Divide: Division Facts	Duration:	11 days
Unit 5:	Fluently Multiply and Divide within 100	Duration:	10 days
Unit 6:	Connect Area to Multiplication and Division	Duration:	9 days
Unit 7:	Represent and Interpret Data	Duration:	9 days
Unit 8:	Use Strategies and Properties to Add and Subtract	Duration:	11 days
Unit 9:	Fluently Add and Subtract Within 1000	Duration:	10 days
Unit 10:	Multiply by Multiples of Ten	Duration:	6 days
Unit 11:	Use Operations with Whole Numbers to Solve Problems	Duration:	8 days
Unit 12:	Understand Fractions as Numbers	Duration:	10 days
Unit 13:	Fraction Equivalence and Comparison	Duration:	10 days
Unit 14:	Solve Time, Capacity and Mass Problems	Duration:	6 days
Unit 15:	Attributes of Two-Dimensional Shapes	Duration:	8 days
Unit 16:	Solving Perimeter Problems	Duration:	10 days
BOE Approved Revision:			
BOE Initial Adoption Date:	August 15, 2017		

**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Understand Multiplication and Division of Whole Numbers		Unit #: 1
Course or Grade Level: 3rd Grade Math		Length of Time: 8 days
Pacing	2017-2018: September 11 through September 20 Daily Warm-up: Daily CC Review	
Essential Questions	<ul style="list-style-type: none"> ● How can you find the total number of objects in equal groups? ● How can you use a number line and skip counting to show multiplication? ● How does an array show multiplication? ● Does order matter when you multiply? ● How many are in each group? ● How can you divide using repeated subtraction? ● How can you use appropriate tools to represent and solve problems? 	
Content	<ul style="list-style-type: none"> ● 1.1 Multiplication as Repeated Addition ● 1.2 Multiplication on the Number Line ● 1.3 Arrays and Multiplication ● 1.4 The Commutative Property ● 1.5 Division as Sharing ● 1.6 Division as Repeated Subtraction 	
Skills	<ul style="list-style-type: none"> ● Use repeated addition to show the relationship between multiplication and addition ● Use number lines to join equal groups ● Use arrays as one way to think about and understand multiplication ● Understand and use the Commutative Property of Multiplication ● Use sharing to separate equal groups and to think about division ● Use repeated subtraction to show the relationship between division and subtraction 	
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark. 	
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention ● Special Needs ● ELL Strategies 	

Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games ● Animated Glossary ● Consumable student edition ● Teacher 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

Cluster: Represent and solve problems involving multiplication and division

3.OA.A.1: Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. *For example, describe and/or represent a context in which a total number of objects can be expressed as 5×7 .*

3.OA.A.2: Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ 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 $56 \div 8$.*

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

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 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)

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.

21st Century Themes

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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21st Century Skills

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

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.

<p>Strand: A. Technology Operations and Concepts: <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i></p>	<p>Content Statement: Understand and use technology systems.</p>	<p>Indicator: 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.</p>
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**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Multiplication Facts: Use Patterns		Unit #: 2
Course or Grade Level: 3rd Grade Math		Length of Time: 8 days
Pacing	2017-2018 Sept. 21 through Oct. 2 Daily Warm-up: Daily CC Review	
Essential Questions	<ul style="list-style-type: none"> ● How can you use patterns to multiply by 2 and 5? ● How can patterns be used to find 9 facts? ● What are the patterns in multiples of 1 and 0? ● What are the patterns in multiples of 10? ● How do you use multiplication facts to solve problems? ● How can you model with math? 	
Content	<ul style="list-style-type: none"> ● 2.1 Two and Five as Factors ● 2.2 Nine as a Factor ● 2.3 Apply Properties: Multiply by 0 and 1 ● 2.4 Multiply by 10 ● 2.5 Multiplication Facts: 0, 1, 2, 5, 9, and 10 ● 2.6 Model with Math 	
Skills	<ul style="list-style-type: none"> ● .Gain fluency in multiplication when using 2 and 5 as factors ● .Gain fluency in multiplication when using 9 as a factor ● Gain fluency in multiplication when multiplying by 0 and 1 ● Gain fluency in multiplication when multiplying by 10 ● Use number relationships and patterns to develop reasoning strategies to support their recall of basic multiplication facts ● Use previously learned concepts and skills to represents and solve problems 	
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark. 	
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention ● Special Needs ● ELL Strategies 	

Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games ● Animated Glossary ● Consumable student edition ● Teacher 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

Cluster: Represent and solve problems involving multiplication and division

3.OA.A.1: Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. *For example, describe and/or represent a context in which a total number of objects can be expressed as 5×7 .*

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

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 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)

Solve problems involving the four operations, and identify and explain patterns in arithmetic

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

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.

21st Century Themes

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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21st Century Skills

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

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.

Strand: A. Technology Operations and Concepts: <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i>	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.
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**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Apply Properties: Multiplication Facts for 3, 4, 6, 7, 8

Unit #: 3

Course or Grade Level: 3rd Grade Math

Length of Time: 10 days

Pacing	2017-2018 Oct. 3 through Oct. 17 Daily Warm-up: Daily CC Review
Essential Questions	<ul style="list-style-type: none"> ● How can you break up a multiplication fact? ● How can you break apart arrays to multiply with 3? ● How can you use doubles to multiply with 4? ● How can you break apart arrays to multiply? ● 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	<ul style="list-style-type: none"> ● 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 with 3 Factors ● 3.8 Math Practices and Problem Solving: Repeated Reasoning
Skills	<ul style="list-style-type: none"> ● Use the Distributive Property to solve problems involving multiplication within 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 unknown facts with 4 as a factor ● Use the Distributive Property to break apart unknown facts with 6 or 7 as a factor ● Use the Distributive Property and known facts to break apart unknown facts with 8 as a factor ● Use strategies such as bar diagrams and arrays with known facts to solve multiplication problems ● Use the Associative Property of Multiplication to group 3 factors and multiply ● Use repeated reasoning with known facts to make generalizations when multiplying
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark.
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention ● Special Needs ● ELL Strategies

Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today’s challenge ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games ● Animated Glossary ● Consumable student edition ● Teacher 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

<p>Cluster: Represent and solve problems involving multiplication and division</p>	<p>3.OA.A.3: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</p>
<p>Understand properties of multiplication and the relationship between multiplication and division.</p>	<p>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 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)</p>
<p>Solve problems involving the four operations, and identify and explain patterns in arithmetic</p>	<p>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</p>

- Math Practices:**
- Make sense of problems and persevere in solving them.
 - Reason abstractly and quantitatively.
 - Construct viable arguments and critique the reasoning of others.
 - 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.

21st Century Themes

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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21st Century Skills

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

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.

<p>Strand: A. Technology Operations and Concepts: <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i></p>	<p>Content Statement: Understand and use technology systems.</p>	<p>Indicator: 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.</p>
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**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Use Multiplication to Divide: Division Facts		Unit #: 4
Course or Grade Level: 3rd Grade Math		Length of Time: 11 days
Pacing	Oct. 18 through Nov. 1 2017-2018 Daily Warm-up: Daily CC Review	
Essential Questions	<ul style="list-style-type: none"> ● How can multiplication facts help you divide? ● 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 patterns 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	<ul style="list-style-type: none"> ● 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 7 ● 4.4 Use Multiplication to Divide with 8 and 9 ● 4.5 Multiplication Patterns: Even and Odd Numbers ● 4.6 Division Involving 0 and 1 ● 4.7 Practice Multiplication and Division Facts ● 4.8 Solve Multiplication and Division Equations ● 4.9 Math Practices and Problem Solving: Make Sense and Persevere 	
Skills	<ul style="list-style-type: none"> ● Use multiplication facts to divide ● Use multiplication facts to find related division facts ● Use multiplication facts to find related division facts ● Use multiplication facts to find related division facts ● Use knowledge of even and odd numbers to identify multiplication patterns ● Use properties to understand division of 0 and 1 ● Use patterns and known facts to find unknown multiplication facts. Use multiplication facts to find related division facts. ● Use multiplication and division facts to find unknown values in equations ● Use previously learned concepts to find and answer hidden questions to solve problems 	
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark. 	
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced 	

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.

21st Century Themes

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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21st Century Skills

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

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.

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: Fluently Multiply and Divide within 100

Unit #: 5

Course or Grade Level: 3rd Grade Math

Length of Time: 10 days

Pacing

Nov. 2 through Nov. 17
2017-2018

Daily Warm-up: Daily CC Review

Essential Questions

- How can you explain patterns in a multiplication chart?
- How can you use a multiplication table to solve division problems?
- How can you find multiplication and division basic facts?
- How do you use strategies to multiply?
- How can you solve word problems using multiplication and division?
- How can you describe a multiplication fact?
- 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: Look For and Use Structure

Skills

- Use the multiplication table and the Distributive Property to find patterns in factors and products.
- Use a multiplication table to find the missing factor in a division problem
- Use number sense and reasoning while practicing multiplication and division basic facts
- Use strategies such as skip counting and properties of operations to multiply
- Solve multiplication and division problems that involve different strategies and representations
- Use multiplication to write and solve real-world problems involving equal groups
- Use division to write and solve real-world problems involving equal groups
- Use the structures of multiplication and division to compare expressions

Assessments

- Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review
- Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark.

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-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games ● Animated Glossary ● Consumable student edition ● Teacher 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

Cluster: Represent and solve problems involving multiplication and division	3.OA.A.3: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
Multiply and divide within 100.	3.OA.C.7: Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one 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.
Solve problems involving the four operations, and identify and explain patterns in arithmetic	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

- Math Practices:**
- Make sense of problems and persevere in solving them.
 - Reason abstractly and quantitatively.
 - Construct viable arguments and critique the reasoning of others.
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- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

21st Century Themes

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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21st Century Skills

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

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.

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: Connect Area to Multiplication and Division

Unit #: 6

Course or Grade Level: 3rd Grade Math

Length of Time: 9 days

Pacing

Nov. 20 through Dec. 5
2017-2018

Daily Warm-up: Daily CC Review

Essential Questions

- How do you measure area?
- How can you measure area using non-standard units?
- How can you measure area using standard units of length?
- How can you find the area of a figure?
- How can the area of rectangles represent the Distributive Property?
- How can you find the area of an irregular shape?
- How can you use structure to solve problems?

Content

- 6.1 Cover Regions
- 6.2 Area: Nonstandard Units
- 6.3 Area: Standard Units
- 6.4 Area of Squares and Rectangles
- 6.5 Apply Properties: Area and the Distributive Property
- 6.6 Apply Properties: Area of Irregular Shapes
- 6.7 Math Practices and Problem Solving: Look For and Use Structure

Skills

- Use unit squares to find the area of a shape
- Use unit squares to find the area of a figure
- Use standard units to measure the area of a shape
- Use unit squares and multiplication to find the areas of squares and rectangles
- Use areas of rectangles to model the Distributive Property of Multiplication
- Use area of rectangles to find the area of irregular shapes
- Solve problems by breaking apart or changing the problem into a simpler problem

Assessments

- Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review
- Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark.

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-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games ● Animated Glossary ● Consumable student edition ● Teacher Edition ● Math and Science Activity (STEM) ● Teacher's Resource Masters ● Manipulatives

New Jersey Student Learning Standards for Mathematics

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

<p>Cluster: Geometric measurement: understand concepts of area and relate area to multiplication and to addition.</p>	<p>3.MD.C.5 a and b: Recognize area as an attribute of plane figures and understand concepts of area measurement.</p> <p>a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.</p> <p>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.</p> <p>3.MD.C.6: Measure areas by counting unit squares (square cm, square m, square in, square ft, and nonstandard units).</p> <p>3.MD.C.7 a, b, c, & d: Relate area to the operations of multiplication and addition.</p> <p>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.</p> <p>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.</p> <p>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 × b and a × c. Use area models to represent the distributive property in mathematical reasoning.</p> <p>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.</p>
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- Math Practices:**
- Make sense of problems and persevere in solving them.
 - Reason abstractly and quantitatively.
 - Construct viable arguments and critique the reasoning of others.
 - Model with mathematics.
 - Use appropriate tools strategically.
 - Attend to precision.
 - Look for and make use of structure.
 - Look for and express regularity in repeated reasoning.

21st Century Themes

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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21st Century Skills

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

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.

<p>Strand: A. Technology Operations and Concepts: <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i></p>	<p>Content Statement: Understand and use technology systems.</p>	<p>Indicator: 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.</p>
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**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Represent and Interpret Data		Unit #: 7
Course or Grade Level: 3rd Grade Math		Length of Time: 7 days
Pacing	Dec. 6 through Dec. 14 2017-2018 Daily Warm-up: Daily CC Review	
Essential Questions	<ul style="list-style-type: none"> ● How can you read picture graphs? ● How do you make a picture graph? ● How do you make a bar graph? ● How can you solve problems using graphs? ● How can you be precise when solving math problems? 	
Content	<ul style="list-style-type: none"> ● 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 in Graphs ● 7.5 Math Practices and Problem Solving: Precision 	
Skills	<ul style="list-style-type: none"> ● 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 ● Use graphs to solve problems ● Use words, symbols, and numbers to accurately and precisely solve math problems 	
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark. 	
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention ● Special Needs ● ELL Strategies 	
Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving 	
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge 	

	<ul style="list-style-type: none"> ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games ● Animated Glossary ● Consumable student edition ● Teacher Edition ● Math and Science Activity (STEM) ● Teacher’s Resource Masters ● Manipulatives
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New Jersey Student Learning Standards for Mathematics

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

Cluster: Represent and solve problems involving multiplication and division	3.OA.A.3: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
Solve problems involving the four operations, and identify and explain patterns in arithmetic.	3.OA.D.8: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding

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

Represent and interpret data.	3.MD.B.3: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets
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Math Practices:

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

21st Century Themes

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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21st Century Skills

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

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.

Strand: A. Technology Operations and Concepts: <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i>	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.
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**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Use Strategies and Properties to Add and Subtract		Unit #: 8
Course or Grade Level: 3rd Grade Math		Length of Time: 11 days
Pacing	2017-2018 Dec. 15 through Jan. 9 Daily Warm-up: Daily CC Review	
Essential Questions	<ul style="list-style-type: none"> ● What are some properties of addition? ● 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	<ul style="list-style-type: none"> ● 8.1 Addition Properties ● 8.2 Algebra: Addition Properties ● 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 	
Skills	<ul style="list-style-type: none"> ● Solve real-world problems using properties of addition ● Identify patterns in the addition table and explain them using algebraic thinking ● Use place value and a number line to round numbers ● Use mental math to add ● Use mental math to subtract ● Use rounding or compatible numbers to estimate a sum ● Use rounding or compatible numbers to estimate a difference ● Solve one-step and multi-step problems using strategies based on the relationship between addition and subtraction ● Solve one-step and multi-step problems by modeling with math 	
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark. 	

Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention ● Special Needs ● ELL Strategies
Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games ● Animated Glossary ● Consumable student edition ● Teacher Edition ● 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 #): Operations and Algebraic Thinking 3.OA

Cluster: Solve problems involving the four operations, and identify and explain patterns in arithmetic.	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.
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Domain (name and #): Numbers and Operations in Base Ten 3.NBT

Use place value understanding and properties of operations to perform multi-digit arithmetic.	3.NBT.A.1: Use place value understanding to round whole numbers to the nearest 10 or 100. 3.NBT.A.2: Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
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- Math Practices:**
- Make sense of problems and persevere in solving them.
 - Reason abstractly and quantitatively.
 - Construct viable arguments and critique the reasoning of others.
 - Model with mathematics.
 - Use appropriate tools strategically.

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

21st Century Themes

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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21st Century Skills

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

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.

<p>Strand: A. Technology Operations and Concepts: <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i></p>	<p>Content Statement: Understand and use technology systems.</p>	<p>Indicator: 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.</p>
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**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Fluently Add and Subtract Within 1000		Unit #: 9
Course or Grade Level: 3rd Grade Math		Length of Time: 10 days
Pacing	Jan. 10 through Jan. 25 2017-2018 Daily Warm-up: Daily CC Review	
Essential Questions	<ul style="list-style-type: none"> ● 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 add more than two numbers? ● How can you break large subtraction problems into smaller ones? ● How can you use subtraction to solve problems? ● How can you subtract from a number with one or more zeros? ● How can you construct arguments? 	
Content	<ul style="list-style-type: none"> ● 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	<ul style="list-style-type: none"> ● Add two 3-digit numbers by breaking apart problems into simpler problems ● Add 3-digit numbers using the standard algorithm ● Add 3-digit numbers using the standard algorithm ● Add three or more numbers using the standard algorithm ● Subtract multi-digit numbers using the expanded algorithm ● Subtract 3-digit numbers using the standard algorithm ● Subtract a 3-digit number from another 3-digit number with one or more zeros using the standard algorithm 	
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark. 	
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention ● Special Needs ● ELL Strategies 	

Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games ● Animated Glossary ● Consumable student edition ● Teacher Edition ● 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 #): Numbers and Operations in Base Ten 3.NBT

Use place value understanding and properties of operations to perform multi-digit arithmetic.	3.NBT.A.2: Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
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Math Practices:

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

21st Century Themes

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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21st Century Skills

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

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.

Strand: A. Technology Operations and Concepts: <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i>	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.
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**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Multiply by Multiples of Ten		Unit #: 10
Course or Grade Level: 3rd Grade Math		Length of Time: 6 days
Pacing	2017-2018 Jan. 26 through Feb. 2 Daily Warm-up: Daily CC Review	
Essential Questions	<ul style="list-style-type: none"> ● How can you multiply on an open number line? ● 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 multiples of 10? 	
Content	<ul style="list-style-type: none"> ● 10.1 Use an Open Number Line to Multiply ● 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	<ul style="list-style-type: none"> ● Use an open number line to find products when one factor is a multiple of 10 ● Use properties of multiplication to find products when one factor is a multiple of 10 ● Use different strategies to find products when one factor is a multiple of 10 ● Use the structure of multiplication and place value to find products when one factor is a multiple of 10 	
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark. 	
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention ● Special Needs ● ELL Strategies 	
Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving 	
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games 	

- Animated Glossary
- Consumable student edition
- Teacher Edition
- 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 #): Numbers and Operations in Base Ten 3.NBT

Use place value understanding and properties of operations to perform multi-digit arithmetic.	3.NBT.A.3: Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80, 5×60) using strategies based on place value and properties of operations.
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- Math Practices:**
- Make sense of problems and persevere in solving them.
 - Reason abstractly and quantitatively.
 - Construct viable arguments and critique the reasoning of others.
 - Model with mathematics.
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21st Century Themes

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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21st Century Skills

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

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.

Strand: A. Technology Operations and Concepts: <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i>	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.
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**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Use Operations with Whole Numbers to Solve Problems

Unit #: 11

Course or Grade Level: 3rd Grade Math

Length of Time: 8 days

Pacing	2017-2018 Mid-year Assessment Feb. 5 and 6 Feb. 5 through Feb. 15 Daily Warm-up: Daily CC Review
Essential Questions	<ul style="list-style-type: none"> ● How can you use diagrams to solve 2-step problems? ● How can you use diagrams to solve 2-step problems? ● How can you solve 2-step problems? ● How can you critique the reasoning of others?
Content	<ul style="list-style-type: none"> ● 11.1 Solve 2-Step Word Problems: Addition and Subtraction ● 11.2 Solve 2-Step Word Problems: Multiplication and Division ● 11.3 Solve 2-Step Word Problems: All Operations ● 11.4 Math Practices and Problem Solving: Critique Reasoning
Skills	<ul style="list-style-type: none"> ● 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 two-step word problems involving multiplication and division of whole numbers ● Examine relationships between quantities in a two-step word problem by writing equations. Choose and apply the operations needed to find the answer ● Critique the reasoning of others by asking questions, identifying mistakes, and providing suggestions for improvement
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark.
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention ● Special Needs ● ELL Strategies
Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge

- Online Solve and Share
- Online Another Look Homework Video
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New Jersey Student Learning Standards for Mathematics

Grade or Conceptual Category (HS only): Third

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

Solve problems involving the four operations, and identify and explain patterns in arithmetic.

3.OA.D.8: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

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.

21st Century Themes

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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21st Century Skills

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

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.

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: Understand Fractions as Numbers

Unit #: 12

Course or Grade Level: 3rd Grade Math

Length of Time: 10 days

Pacing	2017-2018 Feb. 20 through Mar. 5 Daily Warm-up: Daily CC Review
Essential Questions	<ul style="list-style-type: none"> ● How can you name the equal parts of a whole? ● How can you show and name parts of a region? ● 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 represent 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	<ul style="list-style-type: none"> ● 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 style="list-style-type: none"> ● Understand how to read and write unit fractions for equal-size parts of a region ● Use a fraction to represent multiple copies of a unit fraction ● Determine and draw the whole (unit) given one part (unit fraction) ● Represent fractions on a number line ● Represent fractions greater than 1 on a number line ● Measure length to the nearest fourth inch and show the data on a line plot ● Measure length to the nearest half inch and show the data on a line plot ● Determine when a problem has either extra or missing information
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark.
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention ● Special Needs ● ELL Strategies

Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games ● Animated Glossary ● Consumable student edition ● Teacher Edition ● 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 #): Numbers and Operations: Fractions 3.NF	
Cluster: Develop understanding of fractions as numbers.	<p>3.NF.A.1: Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.</p> <p>3.NF.A.2 a & b: Understand a fraction as a number on the number line; represent fractions on a number line diagram.</p> <p style="padding-left: 20px;">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.</p> <p style="padding-left: 20px;">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.</p> <p>3.NF.A.3c: 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.</p>
Domain (name and #): Measurement and Data 3.MD	
Cluster: Represent and interpret data	<p>3.MD.B.4: Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.</p>

**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Fraction Equivalence and Comparison

Unit #: 13

Course or Grade Level: 3rd Grade Math

Length of Time: 10 days

Pacing

2017-2018
Mar. 6 through Mar. 20

Daily Warm-up: Daily CC Review

Essential Questions

- How can different fractions name the same part of a whole?
- How can you use number lines to find equivalent fractions?
- How can you compare fractions with the same denominator?
- How can you compare fractions with the same numerator?
- How can benchmark numbers be used to compare fractions?
- How can you compare fractions using a number line?
- How can you use fractions names to represent whole numbers?
- How can you construct arguments?

Content

- 13.1 Equivalent Fractions: Use Models
- 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 same part of a whole
- Represent equivalent fractions on a number line
- Use models such as fraction strips to compare fractions that refer to the same whole and have the same denominator
- Use models such as fraction strips to compare fractions that refer to the same whole and have the same numerator
- Use benchmark numbers to compare fractions
- Use a number line to compare fractions
- Use fractions names to represent whole numbers
- Construct math arguments using fractions

Assessments

- Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review
- Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark.

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-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games ● Animated Glossary ● Consumable student edition ● Teacher Edition ● 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 #): Numbers and Operations: Fractions 3.NF

Cluster: Develop understanding of fractions as numbers.	<p>3.A.NF.2 a & b: Understand a fraction as a number on the number line; represent fractions on a number line diagram.</p> <p>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.</p> <p>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.</p> <p>3.NF.A.3c: 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.</p> <p>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.</p>
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Math Practices:

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

21st Century Themes

Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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21st Century Skills

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

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.

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: Solve Time, Capacity and Mass Problems

Unit #: 14

Course or Grade Level: 3rd Grade Math

Length of Time: 11 days

Pacing	<p>2017-2018 Mar. 21 through April 12</p> <p>Daily Warm-up: Daily CC Review</p>
Essential Questions	<ul style="list-style-type: none"> ● How do you tell time to the nearest minute? ● How can you find elapsed time? ● How can you add or subtract time intervals? ● What metric units are used to estimate and measure liquid volume? ● How do you measure capacity? ● How can you use reasoning to estimate mass? ● How do you measure mass? ● How do you use drawings to solve problems? ● How can you use reasoning to solve problems?
Content	<ul style="list-style-type: none"> ● 14.1 Time to the Minute ● 14.2 Units of Time: Measure Elapsed Time ● 14.3 Units of Time: Solve Word Problems ● 14.4 Estimate Liquid Volume ● 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 style="list-style-type: none"> ● Show and tell time to the nearest minute using analog and digital clocks ● Tell and write time to the nearest minute and measure time intervals in minutes ● Solve word problems involving addition and subtraction to measure quantities of time ● Use standard units to estimate liquid volume ● Use standard units to estimate liquid volume ● Use standard units to estimate the masses of solid objects ● Use a pan balance with metric weights to measure the mass of objects in grams and kilograms ● Use pictures to help solve problems about mass and volume ● Make sense of quantities and relationships in problems
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark.
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention

	<ul style="list-style-type: none"> ● Special Needs ● ELL Strategies
Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games ● Animated Glossary ● Consumable student edition ● Teacher Edition ● 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 #): Measurement and Data 3.MD

Cluster:
Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

3.MD.A.1: Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

3.MD.A.2: Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).⁶Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Attributes of Two-Dimensional Shapes		Unit #: 15
Course or Grade Level: 3rd Grade Math		Length of Time: 6 days
Date Created: July 2017		BOE Approval Date:
Pacing	2017-2018 April 13 through April 20 PARCC Testing Week of April 16 Daily Warm-up: Daily CC Review	
Essential Questions	<ul style="list-style-type: none"> ● What are some attributes of quadrilaterals? ● How can you describe different groups of shapes? ● How can you analyze and compare shapes? ● How can you be precise when solving math problems? 	
Content	<ul style="list-style-type: none"> ● 15.1 Describe Quadrilaterals ● 15.2 Classify Shapes ● 15.3 Analyze and Compare Quadrilaterals ● 15.4 Math Practices and Problem Solving: Precision 	
Skills	<ul style="list-style-type: none"> ● Identify quadrilaterals and use attributes to describe them ● Classify shapes according to their attributes ● Analyze and compare quadrilaterals and group them by their attributes ● Solve math problems precisely, efficiently, and accurately by using appropriate tools and mathematics vocabulary 	
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark. 	
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention ● Special Needs ● ELL Strategies 	
Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving 	
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge ● Online Solve and Share ● Online Another Look Homework Video 	

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New Jersey Student Learning Standards for Mathematics

Grade or Conceptual Category (HS only): Third

Domain (name and #): Geometry 3.G

Cluster:
Reason with shapes and their attributes.

3.G.A.1: Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Solving Perimeter Problems

Unit #: 16

Course or Grade Level: 3rd Grade Math

Length of Time: 8 days

Pacing	2017-2018 April 23 through May 2 Daily Warm-up: Daily CC Review
Essential Questions	<ul style="list-style-type: none"> ● How do you find perimeter? ● 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 different perimeters? ● How can you use reasoning to solve problems?
Content	<ul style="list-style-type: none"> ● 16.1 Understand Perimeter ● 16.2 Perimeter of Common Shapes ● 16.3 Perimeter and Unknown Side Lengths ● 16.4 Same Perimeter, Different Area ● 16.5 Same Area, Different Perimeter ● 16.6 Math Practices and Problem Solving: Reasoning
Skills	<ul style="list-style-type: none"> ● Find the perimeter of different polygons ● Find the perimeter of different polygons with common shapes ● Use the given sides of a polygon and the know perimeter to find the unknown side length ● Understand the relationship of shapes with the same perimeter and different areas ● Understand the relationship of shapes with the same area and different perimeters ● Understand the relationship between numbers in order to simplify and solve problems involving perimeter
Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark.
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention ● Special Needs ● ELL Strategies
Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools

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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: understand concepts of area and relate area to multiplication and to addition

3.MD.C.7b: 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.

Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures

3.MD.D.8: Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

**Pine Hill Public Schools
Mathematics Curriculum**

Unit Title: Step Up to 4 th Grade Lessons		Unit #:
Course or Grade Level: 3 rd Grade Math		Length of Time: 21 days
Date Created: July 2017		BOE Approval Date:
Pacing	2017-2018 May 3 through June 1 End of Year Assessment: Week of June 4 Daily Warm-up: Daily CC Review	
Essential Questions	<ul style="list-style-type: none"> ● How are the digits in a multi-digit number related to each other? ● How can you multiply by multiples of 10, 100 and 1,000? ● How can you multiply by multiples of 10? ● How can you use an array or an area model to multiply? ● After dividing, what do you do with the remainders? ● How can you use tools to add fractions? ● How can you represent a fraction in a variety of ways? ● What are some common geometric terms? ● What is the unit used to measure angles? ● How can you describe pairs of lines? 	
Content	<ul style="list-style-type: none"> ● Place Value Relationships ● Mental Math: Multiply by Multiples of 10, 100 and 1,000 ● Mental Math: Multiply Multiples of 10 ● Use Models to Multiply 2-digit Numbers by Multiples of 10 ● Interpret Remainders ● Model Addition of Fractions ● Decompose Fractions ● Lines, Rays and Angles ● Understand Angles and Unit Angles ● Lines 	
Skills	<ul style="list-style-type: none"> ● Recognize the relationship between adjacent digits in a multi-digit number ● Multiply multiples of 10, 100 and 1,000 use mental math and place value strategies ● Use mental math strategies to multiply 2-digit by 2-digit multiples of ten ● Use models and properties of operations to multiply 2-digit numbers by multiples of ten ● Solve division problems and interpret remainders ● Use fraction strips and number lines to add fractions ● Decompose a fraction or a mixed number into a sum of fractions in more than one way ● Recognize and draw lines, rays, and angles with different measures ● Find the measure of an angle that turns through a fraction of a circle ● Draw and identify perpendicular, parallel, and intersecting lines 	

Assessments	<ul style="list-style-type: none"> ● Formative: Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving; Daily Common Core Review ● Summative: Placement Test; Mid-Year Benchmark; End of Year Benchmark.
Interventions / differentiated instruction	<ul style="list-style-type: none"> ● Error Intervention ● Re-teach ● Leveled Homework-Intervention, On Level, Advanced ● Center Activities: On-level; Advanced ● Strategic Intervention ● Special Needs ● ELL Strategies
Inter-disciplinary Connections	<ul style="list-style-type: none"> ▪ Altering word problems to reflect current classroom themes ▪ Theme based center activities ▪ Connecting reading strategies to problems solving
Lesson resources / activities	<ul style="list-style-type: none"> ● PearsonRealize.com ● Student and Teacher e-texts ● Smartboard ● Online personalized practice ● Online math tools ● Online Today's challenge ● Online Solve and Share ● Online Another Look Homework Video ● Visual Learning Animation ● Online Math Games ● Animated Glossary ● Consumable student edition ● Teacher Edition ● Math and Science Activity (STEM) ● Teacher's Resource Masters ● Manipulatives

New Jersey Student Learning Standards for Mathematics

Grade or Conceptual Category (HS only): Fourth

Domain (name and #): Measurement and Data 4.MD

Cluster: Geometric measurement: understand concepts of angle and measure angles	<p>4.MD.C.5: Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement</p> <p>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 $\frac{1}{360}$ of a circle is called a "one-degree angle," and can be used to measure angles.</p>
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Domain (name and #): Number and Operations in Base Ten 4.NBT

Cluster: Generalize place value understanding for	<p>4.NBT.A.1: Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. <i>For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.</i></p>
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<p>multi-digit whole numbers</p> <p>Use place value understanding and properties of operations to perform multi-digit arithmetic</p>	<p>4.NBT.A.2: Read and write multi-digit whole numbers using base-ten numerals, 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.</p> <p>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 and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</p> <p>4.NBT.B.6: Find whole-number quotients and remainders with up to four-digit 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.</p>
<p>Domain (name and #): Operations and Algebraic Thinking 4.OA</p>	
<p>Cluster: Use the four operations with whole numbers to solve problems</p>	<p>4.OA.A.3: Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</p>
<p>Domain (name and #): Numbers and Operations- Fractions 4.NF</p>	
<p>Cluster: Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers</p>	<p>4.NF.B.3b: Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. <i>Examples:</i> $3/8 = 1/8 + 1/8 + 1/8$; $3/8 = 1/8 + 2/8$; $2 \frac{1}{8} = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$.</p>
<p>Domain (name and #): Geometry 4.G</p>	
<p>Cluster: Draw and identify lines and angles, and classify shapes by properties of their lines and angles.</p>	<p>4.G.A.1: Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.</p>