

## Pine Hill Public Schools Curriculum

Content Area:	<b>Mathematics</b>		
Course Title/ Grade Level:	Grade 5		
<b>Unit 1:</b>	Understand Place Value	<b>Duration:</b>	<b>9 days</b>
<b>Unit 2:</b>	Add and Subtract Decimals to Hundredths	<b>Duration:</b>	<b>9 days</b>
<b>Unit 3:</b>	Fluently Multiply Multi-digit Whole Numbers	<b>Duration:</b>	<b>9 days</b>
<b>Unit 4:</b>	Use Models and Strategies to Multiply Decimals	<b>Duration:</b>	<b>12 days</b>
<b>Unit 5:</b>	Use Models and Strategies to Divide Whole Numbers	<b>Duration:</b>	<b>10 days</b>
<b>Unit 6:</b>	Use Models and Strategies to Divide Decimals	<b>Duration:</b>	<b>11 days</b>
<b>Unit 7:</b>	Use Equivalent Fractions to Add and Subtract Fractions	<b>Duration:</b>	<b>14 days</b>
<b>Unit 8:</b>	Apply Understanding of Multiplication to Multiply Fractions	<b>Duration:</b>	<b>11 days</b>
<b>Unit 9:</b>	Apply Understanding of Division to Divide Fractions	<b>Duration:</b>	<b>10 days</b>
<b>Unit 10:</b>	Understand Volume Concepts	<b>Duration:</b>	<b>10 days</b>
<b>Unit 11:</b>	Convert Measurements	<b>Duration:</b>	<b>10 days</b>
<b>Unit 12:</b>	Represent and Interpret Data	<b>Duration:</b>	<b>6 days</b>
<b>Unit 13:</b>	Write and Interpret Numerical Expressions	<b>Duration:</b>	<b>7 days</b>
<b>Unit 14:</b>	Graph Points on the Coordinate Plane	<b>Duration:</b>	<b>6 days</b>
<b>Unit 15:</b>	Algebra: Analyze Patterns and Relationships	<b>Duration:</b>	<b>6 days</b>
<b>Unit 16:</b>	Geometric Measurement: Classify Two-Dimensional Figures	<b>Duration:</b>	<b>6 days</b>
BOE Approved Revision:			
BOE Initial Adoption Date:	August 15, 2017		

**Pine Hill Public Schools**  
**Mathematics Curriculum**

<b>Unit Title:</b> Understand Place Value		<b>Unit #: 1</b>
<b>Course or Grade Level:</b> 5th Grade Math		<b>Length of Time:</b> 9 days
<b>Pacing</b>	September  <b>Daily Warm-up: Daily CC Review</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>● How can you explain patterns in the number of zeros in a product?</li> <li>● How are place value positions related?</li> <li>● How can you read and write decimals to the thousandths?</li> <li>● How can you represent decimals?</li> <li>● How can you compare decimals?</li> <li>● How can you round decimals?</li> <li>● How can you use structure to solve problems?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>● 1.1 Patterns with Exponents and Powers of 10</li> <li>● 1.2 Understand Whole Number Place Value</li> <li>● 1.3 Decimals to Thousandths</li> <li>● 1.4 Understand Decimal Place Value</li> <li>● 1.5 Compare Decimals</li> <li>● 1.6 Round Decimals</li> <li>● 1.7 Math Practices and Problem Solving: Look for and Use Structure</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>● Use exponents to write powers of 10 and calculate products</li> <li>● Read and write whole numbers using standard form, expanded form, and number names</li> <li>● Represent decimals to thousandths as fractions and fractions with denominators of 1,000 as decimals</li> <li>● Read and write decimals through thousandths in different ways</li> <li>● Use place value to compare decimals through thousandths</li> <li>● Round decimals to different places</li> <li>● Use the structure of the decimal place value system to solve problem involving patterns</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <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>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>	

<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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> <li>● Manipulatives</li> </ul>

**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Numbers and Operations in Base Ten 5.NBT**

**Cluster:**  
**Understand the place value system**

**5.NBT.A.1: Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.**

**5.NBT.A.2: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.**

**5.NBT.A.3 a & b: Read, write, and compare decimals to thousandths**  
**a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g.,  $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$ .**  
**b. Compare two decimals to thousandths based on meanings of the digits in each place, using  $>$ ,  $=$ , and  $<$  symbols to record the results of comparisons.**

**5.NBT.A.4: Use place value understanding to round decimals to any place.**

**Math Practices:**

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.

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

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

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

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

**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><b>Strand: A. Technology Operations and Concepts:</b> <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i></p>	<p><b>Content Statement:</b> Understand and use technology systems.</p>	<p><b>Indicator:</b> 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**

<b>Unit Title:</b> Add and Subtract Decimals to Hundredths		<b>Unit #: 2</b>
<b>Course or Grade Level:</b> 5th Grade Math		<b>Length of Time:</b> 9 days
<b>Pacing</b>	Sept-Oct  <b>Daily Warm-up: Daily CC Review</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>● How can you use mental math to add?</li> <li>● How can you estimate sums?</li> <li>● How can you use grids to add decimals?</li> <li>● How can you add decimals?</li> <li>● How can you subtract decimals?</li> <li>● How can you add or subtract decimals?</li> <li>● How can you represent a problem with bar diagrams?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>● 2.1 Mental Math</li> <li>● 2.2 Estimate Sums and Differences</li> <li>● 2.3 Use Models to Add and Subtract Decimals</li> <li>● 2.4 Add Decimals</li> <li>● 2.5 Subtract Decimals</li> <li>● 2.6 Add and Subtract Decimals</li> <li>● 2.7 Math Practices and Problem Solving: Model with Math</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>● Use properties of addition and strategies to solve problems mentally</li> <li>● Use rounding or compatible numbers to estimate sums and differences</li> <li>● Model sums and differences of decimals</li> <li>● Add decimals to the hundredths using the standard algorithm</li> <li>● Subtract decimals to the hundredths using the standard algorithm</li> <li>● Add and subtract decimals</li> <li>● Use prior math knowledge and equations or bar diagrams to solve problems</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <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>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>	

<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
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<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <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> <li>● Manipulatives</li> </ul>
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**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Numbers and Operations in Base Ten 5.NBT**

<p><b>Cluster:</b> <b>Understand the place value system</b></p>	<p><b>5.NBT.A.4: Use place value understanding to round decimals to any place.</b></p>
<p><b>Perform operations with multi-digit whole numbers and with decimals to hundredths</b></p>	<p><b>5.NBT.B.7: Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</b></p>

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

- Look for and express regularity in repeated reasoning.

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

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

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

**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**

<b>Unit Title:</b> Fluently Multiply Multi-digit Whole Numbers		<b>Unit #: 3</b>
<b>Course or Grade Level: 5th Grade Math</b>		<b>Length of Time: 9 days</b>
<b>Pacing</b>	Oct  <b>Daily Warm-up: Daily CC Review</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>● How can you use patterns and mental math to multiply a whole number by a power of 10?</li> <li>● How can you estimate products?</li> <li>● How do you multiply 3-digit numbers by 2-digit numbers?</li> <li>● How can you multiply with zeros?</li> <li>● How can you use multiplication to solve problems?</li> <li>● How can you use a bar diagram to solve a multiplication problem?</li> <li>● How can you critique reasoning of others?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>● 3.1 Multiply Greater Numbers by Powers of 10</li> <li>● 3.2 Estimate Products</li> <li>● 3.3 Multiply 3-digit by 2-digit Numbers</li> <li>● 3.4 Multiply Whole Numbers with Zeros</li> <li>● 3.5 Multiply Multi-digit Numbers</li> <li>● 3.6 Solve Word Problems Using Multiplication</li> <li>● 3.7 Math Practices and Problem Solving: Critique Reasoning</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>● Use place value understandings and patterns to mentally multiply whole numbers and powers of 10</li> <li>● Use rounding and compatible numbers to estimate products</li> <li>● Multiply 3-digit by 2-digit numbers by combining equal groups and adding partial products</li> <li>● Use knowledge about place value and multiplying with 2-digit and 3-digit numbers to multiply with zeros</li> <li>● Use properties and the standard algorithm for multiplication to find the product of multi-digit numbers</li> <li>● Use models and strategies to solve word problems</li> <li>● Critique the reasoning of others by asking questions, looking for flaws, and using prior knowledge of estimating products</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <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>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>	





- Look for and express regularity in repeated reasoning.

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

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

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

**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:** Use Models and Strategies to Multiply Decimals

**Unit #: 4**

**Course or Grade Level:** 5th Grade Math

**Length of Time:** 12 days

**Pacing**

Oct

**Daily Warm-up: Daily CC Review**

**Essential Questions**

- What patterns can help you multiply decimals by powers of 10?
- What are some ways to estimate products with decimals?
- How can you model multiplying a decimal by a whole number?
- How do you multiply a decimal by a whole number?
- How can you model decimal multiplication?
- How can you multiply decimals using partial products?
- How can you use properties to multiply decimals?
- How can you use number sense to multiply decimals?
- How can you use the standard algorithm to multiply decimals?
- How can you model a problem with an equation?

**Content**

- 4.1 Multiply Decimals by Powers of 10
- 4.2 Estimate the Product of a Decimal and a Whole Number
- 4.3 Use Models to Multiply a Decimal and a Whole Numbers
- 4.4 Multiply a Decimal by a Whole Number
- 4.5 Use Models to Multiply a Decimal and a Decimal
- 4.6 Multiply Decimals Using Partial Products
- 4.7 Use Properties to Multiply Decimals
- 4.8 Use Number Sense to Multiply Decimals
- 4.9 Multiply Decimals
- 4.10 Math Practices and Problem Solving: Model with Math

**Skills**

- Use knowledge about place value and patterns to find the product of a decimal number and a power of 10
- Use rounding and compatible numbers to estimate the product of a decimal and a whole number
- Use models to represent multiplying a decimal and a whole number
- Use place value understanding and the standard multiplication algorithm to multiply a decimal by a whole number
- Use grids to model decimals and find the product of a decimal and a decimal
- Multiply decimals using partial products and models
- Use properties to multiply decimals
- Use number sense and reasoning to place the decimal point in a product
- Multiply decimals using the standard algorithm for multiplication and multiplication strategies
- Use previously learned concepts and skills to represent and solve problems

<b>Assessments</b>	<ul style="list-style-type: none"> <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>
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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> <li>● Manipulatives</li> </ul>

**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Numbers and Operations in Base Ten 5.NBT**

<p><b>Cluster:</b> Understand the place value system</p> <p><b>Perform operations with multi-digit whole numbers and with decimals to hundredths</b></p>	<p><b>5.NBT.A.2: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.</b></p> <p><b>5.NBT.B.7: Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</b></p>
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**Math Practices:**

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

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

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

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

**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.

<b>Strand: A. Technology Operations and Concepts:</b> <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i>	<b>Content Statement:</b> Understand and use technology systems.	<b>Indicator:</b> 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 Models and Strategies to Divide Whole Numbers

**Unit #: 5**

**Course or Grade Level:** 5th Grade Math

**Length of Time:** 10 days

**Pacing**

November

**Daily Warm-up: Daily CC Review**

**Essential Questions**

- How can patterns help you divide multiples of 10?
- How can you use compatible numbers to estimate quotients?
- How can you use area models to find quotients?
- How can you use partial quotients to solve division problems?
- What are the steps in dividing by a multiple of ten?
- How can you decide where to place the first digit of a quotient?
- How can you use estimation to decide if your quotient is reasonable?
- How can you make sense of problems and persevere in solving them?

**Content**

- 5.1 Use Patterns and Mental math to Divide
- 5.2 Estimate Quotients with 2-digit Divisors
- 5.3 Use Models to Divide with 2-digit Divisors
- 5.4 Use Partial Quotients to Divide
- 5.5 Divide by Multiples of 10
- 5.6 Use Estimation to Place the First Digit of the Quotient
- 5.7 Divide by 2-digit Divisors
- 5.8 Math Practices and Problem Solving: Make Sense and Persevere

**Skills**

- Use place value patterns and mental math to find quotients
- Use compatible numbers and place value patterns to estimate quotients
- Use models to find quotients
- Solve division problems using partial quotients
- Find the quotient when the divisor is a multiple of 10
- Decide where to place the first digit of the quotient when dividing whole numbers
- Use estimation to decide whether a quotient is reasonable when dividing by 2-digit divisors
- Make sense of problems and keep working

**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

	<ul style="list-style-type: none"> <li>● ELL Strategies</li> </ul>
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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> <li>● Manipulatives</li> </ul>
<b>New Jersey Student Learning Standards for Mathematics</b>	
<b>Grade or Conceptual Category (HS only): Fifth</b>	
<b>Domain (name and #): Numbers and Operations in Base Ten 5.NBT</b>	
<b>Cluster:</b> <b>Perform operations with multi-digit whole numbers and with decimals to hundredths</b>	<b>5.NBT.B.6: Find whole-number quotients of whole numbers with up to four-digit dividends and two-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.</b>
<b>Math Practices:</b> <ul style="list-style-type: none"> <li>● Make sense of problems and persevere in solving them.</li> <li>● Reason abstractly and quantitatively.</li> <li>● Construct viable arguments and critique the reasoning of others.</li> <li>● Model with mathematics.</li> <li>● Use appropriate tools strategically.</li> <li>● Attend to precision.</li> <li>● Look for and make use of structure.</li> <li>● Look for and express regularity in repeated reasoning.</li> </ul>	
<a href="#"><u>21<sup>st</sup> Century Themes</u></a>	

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
<b>21<sup>st</sup> Century Skills</b>							
	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills		
<p><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.</p>							
<p><b>Strand: A. Technology Operations and Concepts:</b> <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i></p>			<p><b>Content Statement:</b> Understand and use technology systems.</p>		<p><b>Indicator:</b> 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.</p>		



**Pine Hill Public Schools**  
**Mathematics Curriculum**

**Unit Title:** Use Models and Strategies to Divide Decimals

**Unit #: 6**

**Course or Grade Level:** 5th Grade Math

**Length of Time:** 11 days

**Pacing**

November-December

**Daily Warm-up: Daily CC Review**

**Essential Questions**

- How can you divide decimals by powers of 10?
- How can you use estimation to find quotients?
- How can you use models to find a decimal quotient?
- How can you divide a decimal by a whole number?
- How do you divide decimals by 2-digit numbers?
- How can you use number sense for decimal division?
- How can you divide a decimal by a decimal?
- How does annexing zeros to the dividend help you divide decimals?
- How can you use reasoning to solve problems?

**Content**

- 6.1 Patterns for Dividing with Decimals
- 6.2 Estimate Decimal Quotients
- 6.3 Use Models to Divide by a 1-digit Whole Number
- 6.4 Divide by a 1-digit Whole Number
- 6.5 Divide by a 2-digit Whole Number
- 6.6 Use Number Sense to Divide Decimals
- 6.7 Divide by a Decimal
- 6.8 Continue to Divide with Decimals
- 6.9 Math Practices and Problem Solving: Reasoning

**Skills**

- Use mental math and place value patterns to divide a decimal by a power of 10
- Use reason and strategies such as rounding and compatible numbers to estimate quotients in problems with decimals
- Use models to help find quotients in problems involving decimals
- Use the standard algorithm for division to divide decimals by a whole number
- Use models to visualize the relationship between division and multiplication to divide decimals by a 2-digit whole number
- Use number sense and reasoning to place the decimal point in the quotient when dividing two decimals
- Use the standard algorithm and place value patterns to divide a decimal by another decimal
- Use the standard algorithm to divide decimals, annexing zeros as needed
- Use reasoning to solve problems by making sense of quantities and relationships in the situation

**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.

<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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> <li>● Manipulatives</li> </ul>

**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Numbers and Operations in Base Ten 5.NBT**

**Cluster:  
Understand the place value system**

**5.NBT.A.2: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.**

**Perform operations with multi-digit whole numbers and with decimals to hundredths**

**5.NBT.B.7: Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.**

**Math Practices:**

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

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

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

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

**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:** Use Equivalent Fractions to Add and Subtract Fractions

**Unit #: 7**

**Course or Grade Level:** 5th Grade Math

**Length of Time:** 14 days

**Pacing**

December-January

**Daily Warm-up: Daily CC Review**

**Essential Questions**

- How can you estimate the sum of two fractions?
- How can you find common denominators?
- How can you add fractions with unlike denominators?
- How can you subtract fractions with unlike denominators?
- How can adding and subtracting fractions help you solve problems?
- What are some ways to estimate?
- How can you model addition of mixed numbers?
- How can you add mixed numbers?
- How can you model subtraction of mixed numbers?
- How can you subtract mixed numbers?
- How can adding and subtracting mixed numbers help you solve problems?
- How can you represent a problem with a bar diagram?

**Content**

- 7.1 Estimate Sums and Differences of Fractions
- 7.2 find Common Denominators
- 7.3 Add Fractions with Unlike Denominators
- 7.4 Subtract Fractions with Unlike Denominators
- 7.5 Add and Subtract Fractions
- 7.6 Estimate Sums and Differences of Mixed Numbers
- 7.7 Use Models to Add Mixed Numbers
- 7.8 Add Mixed Numbers
- 7.9 Use Models to Subtract Mixed Numbers
- 7.10 Subtract Mixed Numbers
- 7.11 Add and Subtract Mixed Numbers
- 7.12 Math Practices and Problem Solving: Model with Math

**Skills**

- Estimate sums and differences of fractions by using the nearest half or whole number
- Find common denominators for fractions with unlike denominators
- Add fractions with unlike denominators using equivalent fractions with a common denominator
- Subtract fractions with unlike denominators
- Write equivalent fractions to add and subtract fractions with unlike denominators
- Estimate sums and differences of fractions and mixed numbers
- Add mixed numbers using models
- Add mixed numbers using equivalent fractions and a common denominator
- Use models to subtract mixed numbers

	<ul style="list-style-type: none"> <li>● Subtract mixed numbers using equivalent fractions and a common denominator</li> <li>● Add and subtract mixed numbers using equivalent fractions and a common denominator</li> <li>● Represent a problem situation with a mathematical model</li> </ul>
<b>Assessments</b>	<ul style="list-style-type: none"> <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>
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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> <li>● Manipulatives</li> </ul>

**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Numbers and Operations- Fractions 5.NF**

<p><b>Cluster:</b> Use equivalent fractions as a strategy to add and subtract fractions</p>	<p><b>5.NF.A.1: Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. <i>For example, <math>2/3 + 5/4 = 8/12 + 15/12 = 23/12</math>. (In general, <math>a/b + c/d = (ad + bc)/bd</math>.)</i></b></p> <p><b>5.NF.A.2: Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the</b></p>
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	<b>reasonableness of answers. For example, recognize an incorrect result <math>2/5 + 1/2 = 3/7</math>, by observing that <math>3/7 &lt; 1/2</math>.</b>
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**Math Practices:**

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

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

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

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

**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.

<b>Strand: A. Technology Operations and Concepts:</b> <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i>	<b>Content Statement:</b> Understand and use technology systems.	<b>Indicator:</b> 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 Understanding of Multiplication to Multiply Fractions

**Unit #: 8**

**Course or Grade Level:** 5th Grade Math

**Length of Time:** 11 days

**Pacing**

January

**Daily Warm-up: Daily CC Review**

**Essential Questions**

- What are some ways to multiply a whole number by a fraction?
- How can you model multiplying a fraction by a whole number?
- How can you multiply fractions and whole numbers?
- How can you use a model to multiply fractions?
- How can you find the product of two fractions?
- How can you find the area of a rectangle with fractional side lengths?
- How can you find the product of mixed numbers?
- How can you use number sense to evaluate the size of a product?
- How can you make sense of problems and persevere in solving them?

**Content**

- 8.1 Use Models to Multiply a Whole Number by a Fraction
- 8.2 Use Models to Multiply a Fraction by a Whole Number
- 8.3 Multiply Fractions and Whole Numbers
- 8.4 Use Models to Multiply Two Fractions
- 8.5 Multiply Two Fractions
- 8.6 Area of a Rectangle
- 8.7 Multiply Mixed Numbers
- 8.8 Multiplication as Scaling
- 8.9 Math Practices and Problem Solving: Make Sense and Persevere

**Skills**

- Multiply a whole number by a fraction
- Multiply a fraction by a whole number
- Multiply fractions and whole numbers
- Use models to multiply two fractions
- Multiply two fractions
- Find the area of a rectangle using fractions and diagrams
- Use models, equations, and previously learned strategies to multiply mixed numbers
- Compare the size of the product to the size of one factor without multiplying to consider multiplication as scaling
- Use previously learned knowledge to make sense of problems and persevere in solving them

**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.

<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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> <li>● Manipulatives</li> </ul>

**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Numbers and Operations- Fractions 5.NF**

**Cluster:**  
**Apply and extend previous understandings of multiplication and division to multiply and divide fractions**

**5.NF.B.4 a & b: Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.**

**a. Interpret the product  $(a/b) \times q$  as  $a$  parts of a partition of  $q$  into  $b$  equal parts; equivalently, as the result of a sequence of operations  $a \times q \div b$ . For example, use a visual fraction model to show  $(2/3) \times 4 = 8/3$ , and create a story context for this equation. Do the same with  $(2/3) \times (4/5) = 8/15$ . (In general,  $(a/b) \times (c/d) = ac/bd$ .)**

**b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.**

**5.NF.B.5 a & b: Interpret multiplication as scaling (resizing), by:**

**a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.**



**b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence  $a/b = (n \times a)/(n \times b)$  to the effect of multiplying  $a/b$  by 1.**

**5.NF.B.6: Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.**

**Math Practices:**

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

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

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

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

**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:** Apply Understanding of Division to Divide Fractions

**Unit #: 9**

**Course or Grade Level:** 5th Grade Math

**Length of Time:** 10 days

**Pacing**

January-February

**Daily Warm-up: Daily CC Review**

**Essential Questions**

- How are fractions related to division?
- How can you show a quotient using a fraction or mixed number?
- How is dividing by a fraction related to multiplication?
- How can you divide by a unit fraction?
- How can you model dividing a unit fraction by a whole number?
- How can you divide with unit fractions and whole numbers?
- How can you solve division problems with unit fractions?
- How do you use repeated reasoning when dividing whole numbers and unit fractions?

**Content**

- 9.1 Fractions and Division
- 9.2 Fractions and Mixed Numbers as Quotients
- 9.3 Use Multiplication to Divide
- 9.4 Divide Whole Numbers by Unit Fractions
- 9.5 Divide Unit Fractions by Non-zero Whole Numbers
- 9.6 Divide Whole Numbers and Unit Fractions
- 9.7 Solve Problems Using Division
- 9.8 Math Practices and Problem Solving: Repeated Reasoning

**Skills**

- Understand how fractions are related to division
- Implement division of fractions to show quotients as fractions and mixed numbers
- Use multiplication to divide a whole number by a unit fraction
- Use models such as pictorial models or a number line to show dividing a whole number by a unit fraction
- Use models to divide unit fractions by non-zero whole numbers
- Use models to divide whole numbers and unit fractions. Check your answer using multiplication.
- Solve multi-step problems involving division with unit fractions
- Notice repetition in calculations and generalize about how to divide whole numbers and unit 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

	<ul style="list-style-type: none"> <li>● Special Needs</li> <li>● ELL Strategies</li> </ul>
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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> <li>● Manipulatives</li> </ul>

**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Numbers and Operations- Fractions 5.NF**

**Cluster:**  
**Apply and extend previous understandings of multiplication and division to multiply and divide fractions**

**5.NF.B.3: Interpret a fraction as division of the numerator by the denominator ( $a/b = a \div b$ ). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret  $3/4$  as the result of dividing 3 by 4, noting that  $3/4$  multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size  $3/4$ . If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?***

**5.NF.B.7 a, b & c: Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.**

**a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for  $(1/3) \div 4$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that  $(1/3) \div 4 = 1/12$  because  $(1/12) \times 4 = 1/3$ .***

**b. Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for  $4 \div (1/5)$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that  $4 \div (1/5) = 20$  because  $20 \times (1/5) = 4$ .***

c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?*

**Math Practices:**

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

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

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

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

**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**

<b>Unit Title:</b> Understand Volume Concepts		<b>Unit #: 10</b>
<b>Course or Grade Level:</b> 5th Grade Math		<b>Length of Time:</b> 10 days
<b>Pacing</b>	February  <b>Daily Warm-up: Daily CC Review</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>● How can you measure space inside a solid figure?</li> <li>● How can you use a formula to find the volume of a rectangular prism?</li> <li>● How can you find the volume of a rectangular prism when the area of the base is given?</li> <li>● How can you find the volume of solid figures composed of two rectangular prisms?</li> <li>● How can you use volume formulas to solve real-world problems?</li> <li>● How can you use appropriate tools to solve volume problems?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>● 10.1 Model Volume</li> <li>● 10.2 Develop a Volume Formula</li> <li>● 10.3 Volume of Prisms</li> <li>● 10.4 Combine Volumes of Prisms</li> <li>● 10.5 Solve Word Problems Using Volume</li> <li>● 10.6 Math Practices and Problem Solving: Use Appropriate Tools</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>● Find the volume of solid figures</li> <li>● Find the volume of rectangular prisms using a formula</li> <li>● Find the volume of prisms in different ways</li> <li>● Find the volume of a solid figure that is the combination of two or more rectangular prisms</li> <li>● Use models, prior knowledge of volumes, and previously learned strategies to solve word problems involving volume</li> <li>● Use previously learned knowledge about volumes to choose the appropriate tools to solve volume problems</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <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>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	

<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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> <li>● Manipulatives</li> </ul>
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**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Measurement and Data 5.MD**

**Cluster:**

**Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition**

**5.MD.C.3 a & b: Recognize volume as an attribute of solid figures and understand concepts of volume measurement.**

**a. A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.**

**b. A solid figure which can be packed without gaps or overlaps using  $n$  unit cubes is said to have a volume of  $n$  cubic units.**

**5.MD.C.4: Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units.**

**5.MD.C.5 a, b, & c: Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.**

**a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.**

**b. Apply the formulas  $V = l \times w \times h$  and  $V = B \times h$  for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.**

**c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.**

**Math Practices:**

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

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

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

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

**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**

<b>Unit Title:</b> Convert Measurements		<b>Unit #: 11</b>
<b>Course or Grade Level:</b> 5th Grade Math		<b>Length of Time:</b> 10 days
<b>Pacing</b>	February-March  <b>Daily Warm-up: Daily CC Review</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>● How do you change from one unit of length to another?</li> <li>● How do you convert customary units of capacity?</li> <li>● How can you convert units of weight?</li> <li>● How do you convert metric units of length?</li> <li>● How do you convert metric units of capacity?</li> <li>● How do you convert metric units of mass?</li> <li>● How can you convert units of measurement to solve a problem?</li> <li>● How can you be precise when solving math problems?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>● 11.1 Convert Customary Units of Length</li> <li>● 11.2 Convert Customary Units of Capacity</li> <li>● 11.3 Convert Customary Units of Weight</li> <li>● 11.4 Convert Metric Units of Length</li> <li>● 11.5 Convert Metric Units of Capacity</li> <li>● 11.6 Convert Metric Units of Mass</li> <li>● 11.7 Solve Word Problems Using Measurement Conversions</li> <li>● 11.8 Math Practices and Problem Solving: Precision</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>● Convert customary units of length</li> <li>● Convert customary units of capacity</li> <li>● Convert customary units of weight</li> <li>● Convert metric units of length</li> <li>● Convert metric units of capacity</li> <li>● Convert metric units of mass</li> <li>● Solve real-world problems with measurement conversions</li> <li>● Be precise when solving measurement problems</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <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>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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> </ul>	



	<ul style="list-style-type: none"> <li>● Special Needs</li> <li>● ELL Strategies</li> </ul>
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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> <li>● Manipulatives</li> </ul>

**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Measurement and Data 5.MD**

**Cluster:**  
**Convert like measurement units within a given measurement system**

**5.MD.A.1: Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.**

**Domain (name and #): Numbers and Operations in Base Ten 5.NBT**

**Cluster:**  
**Understand the place value system**

**Perform operations with multi-digit whole numbers and with decimals to hundredths**

**5.NBT.A.2: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.**

**5.NBT.B.5: Fluently multiply multi-digit whole numbers using the standard algorithm.**

**5.NBT.B.6: Find whole-number quotients of whole numbers with up to four-digit dividends and two-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.**

**Math Practices:**

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

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

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

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

**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**

<b>Unit Title:</b> Represent and Interpret Data		<b>Unit #: 12</b>
<b>Course or Grade Level:</b> 5th Grade Math		<b>Length of Time:</b> 6 days
<b>Pacing</b>	March  <b>Daily Warm-up: Daily CC Review</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>● How can you analyze data displayed in a line plot?</li> <li>● How can you use a line plot to organize and represent measurement data?</li> <li>● How can you use measurement data represented in a line plot to solve problems?</li> <li>● How can you critique the reasoning of others?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>● 12.1 Analyze Line Plots</li> <li>● 12.2 Make Line Plots</li> <li>● 12.3 Solve Word Problems Using Measurement Data</li> <li>● 12.4 Math Practices and Problem Solving: Critique Reasoning</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>● Read and analyze line plots</li> <li>● Organize and display data in a line plot</li> <li>● Solve problems using data in a line plot</li> <li>● Critique the reasoning of others using understanding of line plots and fractions</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <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>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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>	

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**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Measurement and Data 5.MD**

**Cluster:**  
**Represent and interpret data**

**5.MD.B.2: Make a line plot to display a data set of measurements in fractions of a unit ( $1/2$ ,  $1/4$ ,  $1/8$ ). Use operations on fractions for this grade to solve problems involving information presented in line plots. *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.***

**Domain (name and #): Numbers and Operations-Fractions 5.NF**

**Cluster:**  
**Use equivalent fractions as a strategy to add and subtract fractions**

**5.NF.A.2: Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result  $2/5 + 1/2 = 3/7$ , by observing that  $3/7 < 1/2$ .***

**Apply and extend previous understandings of multiplication and division to multiply and divide fractions**

**5.NF.B.6: Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.**

**Math Practices:**

- Make sense of problems and persevere in solving them.
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- 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.

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
<b>21<sup>st</sup> Century Skills</b>							
	Creativity and Innovation	X	Critical Thinking and Problem Solving	X	Communication and Collaboration		Information Literacy
	Media Literacy		ICT Literacy	X	Life and Career Skills		
<p><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.</p>							
<p><b>Strand: A. Technology Operations and Concepts:</b> <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i></p>			<p><b>Content Statement:</b> Understand and use technology systems.</p>		<p><b>Indicator:</b> 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.</p>		

**Pine Hill Public Schools**  
**Mathematics Curriculum**

<b>Unit Title:</b> Write and Interpret Numerical Expressions		<b>Unit #: 13</b>
<b>Course or Grade Level:</b> 5th Grade Math		<b>Length of Time:</b> 7 days
<b>Pacing</b>	March  <b>Daily Warm-up: Daily CC Review</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>● How can you evaluate a numerical expression with more than one operation?</li> <li>● What order should you use when you evaluate an expression?</li> <li>● How can you write a numerical expression to record calculations?</li> <li>● How can you interpret numerical expressions without evaluating them?</li> <li>● How can you use reasoning to solve problems?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>● 13.1 Order of Operations</li> <li>● 13.2 Evaluate Expressions</li> <li>● 13.3 Write Numerical Expressions</li> <li>● 13.4 Interpret Numerical Expressions</li> <li>● 13.5 Math Practices and Problem Solving: Reasoning</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>● Use the order of operations to evaluate expressions</li> <li>● Evaluate expressions with parentheses, brackets, and braces</li> <li>● Write simple expressions that show calculations with numbers</li> <li>● Interpret numerical expressions without evaluating them</li> <li>● Use reasoning to solve problems by making sense of quantities and relationships in the situation</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <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>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	

<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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> <li>● Manipulatives</li> </ul>
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**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Operations and Algebraic Thinking 5.OA**

<b>Cluster: Write and interpret numerical expressions</b>	<p><b>5.OA.A.1: Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</b></p> <p><b>5.OA.A.2: Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. <i>For example, express the calculation “add 8 and 7, then multiply by 2” as <math>2 \times (8 + 7)</math>. Recognize that <math>3 \times (18932 + 921)</math> is three times as large as <math>18932 + 921</math>, without having to calculate the indicated sum or product.</i></b></p>
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**Math Practices:**

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

[21<sup>st</sup> Century Themes](#)

	Global Awareness	X	Financial, Economic, Business, and Entrepreneurial Literacy		Civic Literacy		Health Literacy
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[21<sup>st</sup> Century Skills](#)

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

**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.

<b>Strand: A. Technology Operations and Concepts:</b> <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i>	<b>Content Statement:</b> Understand and use technology systems.	<b>Indicator:</b> 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:** Graph Points on the Coordinate Plane

**Unit #: 14**

**Course or Grade Level:** 5th Grade Math

**Length of Time:** 6 days

<b>Pacing</b>	<p>April</p> <p><b>Daily Warm-up: Daily CC Review</b></p>
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>● How do you name a point on a coordinate grid?</li> <li>● How do you graph a point on a coordinate grid?</li> <li>● How can you use ordered pairs to solve problems?</li> <li>● How can you use reasoning to solve mathematical problems?</li> </ul>
<b>Content</b>	<ul style="list-style-type: none"> <li>● 14.1 The Coordinate System</li> <li>● 14.2 Graph Data Using Ordered Pairs</li> <li>● 14.3 Solve Problems Using Ordered Pairs</li> <li>● 14.4 Math Practices and Problem Solving: Reasoning</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>● Locate points on a coordinate grid</li> <li>● Graph points on a coordinate grid</li> <li>● Solve real-world problems by graphing points</li> <li>● Use reasoning to solve problems by making sense of quantities and relationships in the situation</li> </ul>
<b>Assessments</b>	<ul style="list-style-type: none"> <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>
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● PearsonRealize.com</li> <li>● Student and Teacher e-texts</li> <li>● Smartboard</li> <li>● Online personalized practice</li> <li>● Online math tools</li> </ul>

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**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Geometry 5.G**

**Cluster:**

**Graph points on the coordinate plane to solve real-world and mathematical problems**

**5.G.A.1: Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g.,  $x$ -axis and  $x$ -coordinate,  $y$ -axis and  $y$ -coordinate).**

**5.G.A.2: Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.**

**Math Practices:**

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

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

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

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

**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.

<b>Strand: A. Technology Operations and Concepts:</b> <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i>	<b>Content Statement:</b> Understand and use technology systems.	<b>Indicator:</b> 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**

<b>Unit Title:</b> Algebra: Analyze Patterns and Relationships		<b>Unit #: 15</b>
<b>Course or Grade Level:</b> 5th Grade Math		<b>Length of Time:</b> 6 days
<b>Pacing</b>	April <b>Daily Warm-up: Daily CC Review</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>● How can you solve problems involving numerical patterns?</li> <li>● How can you identify relationships between patterns?</li> <li>● How can you generate and graph numerical patterns?</li> <li>● How can you make sense of a problem and persevere in solving it?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>● 15.1 Numerical Patterns</li> <li>● 15.2 More Numerical Patterns</li> <li>● 15.3 Analyze and Graph Relationships</li> <li>● 15.4 Math Practices and Problem Solving: Make Sense and Persevere</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>● Analyze numerical patterns</li> <li>● Use tables to identify relationships between patterns</li> <li>● Analyze patterns and graph ordered pairs generated from number sequences</li> <li>● Make sense of problems and persevere in solving them</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <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>	
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>	
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>	
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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> </ul>	

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**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): Geometry 5.G**

**Cluster:**

**Graph points on the coordinate plane to solve real-world and mathematical problems**

**5.G.A.2: Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.**

**Domain (name and #): Operations and Algebraic Thinking 5.OA**

**Cluster:**

**Analyze patterns and relationships**

**5.OA.B.3: Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.***

**Math Practices:**

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

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

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

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

**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.

<b>Strand: A. Technology Operations and Concepts:</b> <i>Students demonstrate a sound understanding of technology concepts, systems and operations.</i>	<b>Content Statement:</b> Understand and use technology systems.	<b>Indicator:</b> 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:** Geometric Measurement: Classify Two-Dimensional Figures

**Unit #: 16**

**Course or Grade Level:** 5th Grade Math

**Length of Time:** 6 days

<b>Pacing</b>	<p>April-May</p> <p><b>Daily Warm-up: Daily CC Review</b></p>
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>● How can you classify triangles?</li> <li>● What are some properties of quadrilaterals?</li> <li>● How are special quadrilaterals related to each other?</li> <li>● How can you construct arguments?</li> </ul>
<b>Content</b>	<ul style="list-style-type: none"> <li>● 16.1 Classify Triangles</li> <li>● 16.2 Classify Quadrilaterals</li> <li>● 16.3 continue to Classify Quadrilaterals</li> <li>● 16.4 Math Practices and Problem Solving: Construct Arguments</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>● Classify triangles by their angles and sides</li> <li>● Classify quadrilaterals by their properties</li> <li>● Classify quadrilaterals using a hierarchy</li> <li>● Construct arguments about geometric figures</li> </ul>
<b>Assessments</b>	<ul style="list-style-type: none"> <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>
<b>Interventions / differentiated instruction</b>	<ul style="list-style-type: none"> <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>
<b>Inter-disciplinary Connections</b>	<ul style="list-style-type: none"> <li>▪ Altering word problems to reflect current classroom themes</li> <li>▪ Theme based center activities</li> <li>▪ Connecting reading strategies to problems solving</li> </ul>
<b>Lesson resources / activities</b>	<ul style="list-style-type: none"> <li>● 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> </ul>

- 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): Fifth**

**Domain (name and #): Geometry 5.G**

**Cluster:**

**Classify two-dimensional figures into categories based on their properties**

**5.G.B.3: Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.***

**5.G.B.4: Classify two-dimensional figures in a hierarchy based on properties.**

**Math Practices:**

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

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

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

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

**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**

<b>Unit Title:</b> Step Up to 6th Grade Lessons		<b>Unit #:</b>
<b>Course or Grade Level:</b> 5th Grade Math		<b>Length of Time:</b> 16 days
<b>Pacing</b>	May-June  <b>Daily Warm-up: Daily CC Review</b>	
<b>Essential Questions</b>	<ul style="list-style-type: none"> <li>● What are different ways to represent integers?</li> <li>● How can you compare and order integers?</li> <li>● How can you graph a point on a coordinate plane?</li> <li>● What is the mathematical way to compare quantities?</li> <li>● Are there special types of ratios?</li> <li>● What is a percent?</li> <li>● How are fractions, decimals, and percents related?</li> <li>● How can you model division of fractions?</li> <li>● How are division and multiplication of fractions related?</li> <li>● How can you use the formula for the area of a rectangle to find the area of a parallelogram?</li> </ul>	
<b>Content</b>	<ul style="list-style-type: none"> <li>● Understand Integers</li> <li>● Compare and Order Integers</li> <li>● Rational Numbers on the Coordinate Plane</li> <li>● Understand Ratios</li> <li>● Understand Rates</li> <li>● Understand Percents</li> <li>● Fractions, Decimals, and Percents</li> <li>● Understand Division of Fractions</li> <li>● Divide Whole Numbers by Fractions</li> <li>● Area of Parallelograms and Rhombuses</li> </ul>	
<b>Skills</b>	<ul style="list-style-type: none"> <li>● Recognize positive numbers and their opposites</li> <li>● Compare and order integers</li> <li>● Identify and graph points with rational number coordinates on the coordinate plane</li> <li>● Use ratios and ratio language to describe the relationship between two quantities</li> <li>● Use rates to solve problems</li> <li>● Represent and find the percent of a whole</li> <li>● Write equivalent values as fractions, decimals, or percents</li> <li>● Use models to divide with fractions</li> <li>● Divide whole numbers by fractions</li> <li>● Develop and use the formulas for the areas of parallelograms and rhombuses</li> </ul>	
<b>Assessments</b>	<ul style="list-style-type: none"> <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>	

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**New Jersey Student Learning Standards for Mathematics**

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

**Domain (name and #): The Number System 6.NS**

**Cluster:**  
**Apply and extend previous understandings of multiplication and division to divide fractions by fractions**

**6.NS.A.1: Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, create a story context for  $(2/3) \div (3/4)$  and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that  $(2/3) \div (3/4) = 8/9$  because  $3/4$  of  $8/9$  is  $2/3$ . (In general,  $(a/b) \div (c/d) = ad/bc$ ). How much chocolate will each person get if 3 people share  $1/2$  lb of chocolate equally? How many  $3/4$ -cup servings are in  $2/3$  of a cup of yogurt? How wide is a rectangular strip of land with length  $3/4$  mi and area  $1/2$  square mi?***

**Apply and extend previous understandings of numbers to the system of rational numbers**

**6.NS.C.5: Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.**

	<p><b>6.NS.C.6 a, b, &amp; c:</b> Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.</p> <p>a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., <math>-(-3) = 3</math>, and that 0 is its own opposite.</p> <p>b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.</p> <p>c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.</p> <p><b>6.NS.C.7 a &amp; b:</b> Understand ordering and absolute value of rational numbers.</p> <p>a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. <i>For example, interpret <math>-3 &gt; -7</math> as a statement that <math>-3</math> is located to the right of <math>-7</math> on a number line oriented from left to right.</i></p> <p>b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. <i>For example, write <math>-3^{\circ}\text{C} &gt; -7^{\circ}\text{C}</math> to express the fact that <math>-3^{\circ}\text{C}</math> is warmer than <math>-7^{\circ}\text{C}</math>.</i></p>
<p><b>Domain (name and #):</b> Rations and Proportional Relationships 6.RP</p>	
<p><b>Cluster:</b> Understand ratio concepts and use ratio reasoning to solve problems</p>	<p><b>6.RP.A.1:</b> Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. <i>For example, “The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak.” “For every vote candidate A received, candidate C received nearly three votes.”</i></p> <p><b>6.RP.A.2:</b> Understand the concept of a unit rate <math>a/b</math> associated with a ratio <math>a:b</math> with <math>b \neq 0</math>, and use rate language in the context of a ratio relationship. <i>For example, “This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is <math>3/4</math> cup of flour for each cup of sugar.” “We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger.”</i></p> <p><b>6.RP.A.3c:</b> Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.</p>
<p><b>Domain (name and #):</b>Geometry 6.G</p>	
<p><b>Cluster:</b> Solve real-world and mathematical problems involving area, surface area, and volume</p>	<p><b>6.G.A.1:</b> Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.</p>
<p><b>Math Practices:</b></p>	

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