| Pine Hill Public Schools  
| Mathematics Curriculum |
|------------------------|------------------------|
| **Unit Title:** Numeration (Topic 1) | **Unit #:** 1 |
| **Course or Grade Level:** 5th grade | **Length of Time:** 2 weeks |
| **Date Created:** 01/19/12 | **BOE Approval Date:** |

**Pacing**
- Week #1 - 1 day benchmark assessment administration
- Week #2 - 2 days benchmark assessment administration
- Week #3 - Lessons 1.1, 1.2, & 1.3
- Week #3 - Lessons 1.4 & 1.5, Review, and Topic Test
- 2013-2014 Dates: Sep. 5 through Sep. 19

**Essential Questions**
- How can you read and write large numbers?
- How can you compare and order whole numbers?
- How can you represent a decimal in a place value chart?
- How can you compare and order decimals?
- How can you use information organized on a grid to help find a pattern?

**Content**
- Place Value (Lesson 1.1)
- Comparing & Ordering Whole Numbers (Lesson 1.2)
- Decimal Place Value (Lesson 1.3)
- Comparing & Ordering Decimals (Lesson 1.4)
- Problem Solving: Look for a Pattern (Lesson 1.5)

**Skills**
- Write the standard, expanded, and word forms of whole numbers in the billions and identify the value of digits in whole numbers
- Compare and order whole numbers through billions
- Write decimals in standard form, word form, and expanded through millionths
- Compare and order decimals through thousandths
- Look for patterns with decimal number sets in order to solve problems

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

**Interventions / differentiated instruction**
- Error Intervention
- Differentiated Instruction – Intervention, On-Level, and Advanced
- Leveled Homework – Reteach, Practice, and Enrichment
- Center Activities
- Special Needs
- Below Level
- ELL Strategies

**Interdisciplinary Connections**
- Altering word problems to reflect current classroom themes
- Theme based center activities
- Connecting reading strategies to problems solving

**Lesson resources / activities**
- Pearsonsuccessnet.com
- E-tools
- Smartboard
- Student Text
- Workbook
- Teacher Text
- Manipulatives

**Common Core State Standards**
### Grade or Conceptual Category (HS only): Fifth

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

<table>
<thead>
<tr>
<th>Cluster: Understand the place value system</th>
<th>5.NBT.3 Read, write, and compare decimals to thousandths</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.NBT.3a Read and write decimals to thousandths using base ten numerals, number names, and expanded form, e.g. 347.392 = 3 x 100 + 4 x 10 + 7 x 1 + 3 X (1/10) + 9 X (1/100) + 2 x (1/1000)</td>
</tr>
<tr>
<td></td>
<td>5.NBT.3b Compare two decimals to thousandths based on meanings of the digits in each place, using &gt;, =, or &lt; symbols to record the results of comparisons</td>
</tr>
</tbody>
</table>

**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

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</table>
# Adding & Subtracting Whole Numbers & Decimals (Topic 2)

## Course or Grade Level: 5th grade  
Length of Time: 1 week, 3 days

### Date Created: 01/19/12  
BOE Approval Date:

<table>
<thead>
<tr>
<th>Pacing</th>
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</table>
| Week #1 - Lesson 2.1  
Week #2 - Lessons 2.2, 2.3, 2.4, 2.5 & Supplemental Lesson 2.6A  
Week #3- Lessons 2.6, 2.7, & 2.8, Review and Topic Test  
2013-2014 Dates: Sep. 20 through Oct. 4 |

### Daily Warm-up: Windows/Test Prep

### Essential Questions

- How can you use properties of addition to help you add and subtract mentally?
- How can you round whole numbers and decimals?
- How can you estimate to find sums and differences?
- How can you draw a picture to help you choose an operation?
- How can you use a place value chart to help add or subtract large numbers?
- How can you use a grid to add and subtract decimals?
- How can you add decimals?
- How can you subtract decimals?
- How can you solve problems that require more than one step?

### Content

- Mental Math (Lesson 2.1)
- Rounding Whole Numbers & Decimals (Lesson 2.2)
- Estimating Sums & Differences (Lesson 2.3)
- Problem Solving: Draw a Picture & Write an Equation (Lesson 2.4)
- Adding & Subtracting (Lesson 2.5)
- Modeling Addition and Subtraction of Decimals (Supplemental Lesson 2.6A)
- Adding Decimals (Lesson 2.6)
- Subtracting Decimals (Lesson 2.7)
- Problem Solving: Multiple-Step Problems (Lesson 2.8)

### Skills

- Compute sums and differences mentally using the commutative and associative properties of addition, compatible numbers, and compensation
- Round whole numbers through millions and decimals through thousandths
- Use rounding and compatible numbers to estimate sums and differences of whole numbers and decimals
- Use pictures and write equations to help them solve problems
- Compute sums and differences of two large whole numbers
- Add and subtract decimals in tenths and hundredths using models
- Compute sums of decimals involving tenths, hundredths, and thousandths
- Compute differences of decimals involving tenths, hundredths, and thousandths
- Use multiple steps to solve a variety of problems

### Assessments

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

### Interventions / differentiated instruction

- Error Intervention
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### Common Core State Standards

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

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

**Cluster:** Understand the place value system

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

- **5.NBT.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

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

- **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
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### Pine Hill Public Schools
#### Mathematics Curriculum

<table>
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<tr>
<th>Unit Title:</th>
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<tr>
<td>Course or Grade Level:</td>
<td>5th grade</td>
<td>Length of Time: 2 weeks</td>
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<tr>
<td>Date Created:</td>
<td>01/18/12</td>
<td>BOE Approval Date:</td>
</tr>
</tbody>
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#### Pacing
- Week #1- Lessons 3.1, 3.2, 3.3, & 3.4
- Week #2- Lessons 3.5, 3.6, 3.7 & 3.8
- Week #3- Review & Topic Test
- 2013-2014 Dates: Oct. 7 through Oct. 22

#### Daily Warm-up: Windows/Test Prep

#### Essential Questions
- What are the properties of multiplication?
- How can you use mental math to multiply by multiples of 10, 100, or 1,000?
- How can you estimate products?
- How do you multiply by 1-digit numbers?
- How do you multiply by 2-digit numbers?
- How can you multiply 3-digit numbers by 2-digit numbers?
- How can you use exponents to represent repeated multiplication of the same number?
- How can you draw a picture to help choose an operation?

#### Content
- Multiplication Properties (Lesson 3.1)
- Using Mental Math to Multiply (Lesson 3.2)
- Estimating Products (Lesson 3.3)
- Multiplying by 1-digit Numbers (Lesson 3.4)
- Multiplying 2-digit by 2-digit Numbers (Lesson 3.5)
- Multiplying Greater Numbers (Lesson 3.6)
- Exponents (Lesson 3.7)
- Draw a Picture and Write an Equation (Lesson 3.8)

#### Skills
- Identify and apply the commutative, associative, identify, and zero properties of multiplication
- Mentally compute products of whole numbers using place value patterns and the properties of multiplication
- Use rounding or compatible numbers to estimate products of whole numbers
- Use partial products or the traditional algorithm to multiply multi-digit numbers by a 1-digit number
- Multiply 2-digit numbers by 2-digit numbers
- Multiply 2-digit numbers by factors with more than 2-digits
- Use exponential notation
- Use diagrams and write equations to solve problems

#### Assessments
- Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving
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**Common Core State Standards**

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

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

**Cluster: Understand the place value system**

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

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

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

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

**Cluster: Write and interpret numerical expressions**

- **5.OA.2** Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them

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<tr>
<td>Unit Title:</td>
<td>Dividing by 1-Digit Divisors (Topic 4)</td>
<td>Unit #: 4</td>
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<tr>
<td>Pacing</td>
<td>Week #1- Lesson 4.1, 4.2 &amp; 4.3</td>
<td>Week #2- Lessons 4.4, 4.5, &amp; 4.6</td>
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<td>Week #3- Lessons 4.7, 4.8, &amp; 4.9</td>
<td>Week #4- Review &amp; Topic Test</td>
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<td>2013-2014 Dates: Oct. 23 through Nov. 5</td>
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<td>Daily Warm-up: Windows/Test Prep</td>
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<tr>
<td>Essential Questions</td>
<td>How can you use mental math to divide multiples of 10 and 100?</td>
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<td></td>
<td>How can you use compatible numbers to estimate quotients?</td>
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<td></td>
<td>How can you check that your answer is reasonable?</td>
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<td></td>
<td>How can you use models and symbols to understand and record division?</td>
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<tr>
<td></td>
<td>When you divide a 3-digit number by a 1-digit number, how do you know where to put the first digit in the quotient?</td>
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<td>When do you write a zero in the quotient?</td>
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<td>Which numbers are factors of a number?</td>
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<td>How many factor pairs does a prime number have?</td>
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<td>How can you draw a picture to help choose an operation?</td>
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<tr>
<td>Content</td>
<td>Dividing Multiples of 10 and 100 (Lesson 4.1)</td>
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<tr>
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<td>Estimating Quotients (Lesson 4.2)</td>
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<td>Reasonableness (Lesson 4.3)</td>
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<td>Connecting Models and Symbols (Lesson 4.4)</td>
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<td>Dividing by 1-digit Divisors (Lesson 4.5)</td>
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<td>Zeros in the Quotient (Lesson 4.6)</td>
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<td>Understanding Factors (Lesson 4.7)</td>
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<td>Prime and Composite Numbers (Lesson 4.8)</td>
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<td>Draw a Picture and Write an Equation (Lesson 4.9)</td>
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<tr>
<td>Skills</td>
<td>Find the quotient of a division problem whose dividend is a multiple of 10, where division involves a basic fact</td>
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<td>Use rounding and compatible numbers to estimate quotients of whole numbers</td>
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<td>Check problems for reasonableness by using various methods, including estimation and checking their final answer</td>
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<td>Find quotients using the model of sharing money</td>
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<td>Divide 3-digit whole numbers by 1-digit divisors</td>
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<td>Divide with zeros in the quotient</td>
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<td>Use divisibility rules to determine if a number is divisible by another and to find factor pairs of a given number</td>
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<td>Identify numbers as prime or composite and find the prime factorization of a number</td>
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<td>Use pictures and equations to help them represent remainders in a problem</td>
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### Common Core State Standards

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

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

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

5.NBT.6 Find whole number quotients of whole numbers with up to 4-digit dividends and 2-digit divisors, using the 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
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## Pine Hill Public Schools
### Mathematics Curriculum

**Unit Title:** Dividing by 2-digit Divisors (Topic 5)  
**Unit #:** 5  
**Course or Grade Level:** 5th grade  
**Length of Time:** 2 weeks  
**Date Created:** 01/18/12  
**BOE Approval Date:**

### Pacing
- **Week #1:** Lesson 5.1  
- **Week #2:** Lesson 5.2, Supplemental Lesson 5.3A, Lessons 5.3, 5.4, & 5.5  
- **Week #3:** Lessons 5.6, 5.7, 5.8  
- **Week #4:** Review & Topic Test  
2013-2014 Dates: Nov. 6 through Nov. 22

### Daily Warm-up: Windows/Test Prep
- How can patterns help you divide large multiples of 10?  
- How can you use compatible numbers to estimate quotients?  
- How can you use arrays to model multi-digit division?  
- How can you solve multiple-step problems?  
- How do you divide by a multiple of 10?  
- What are the steps for dividing by 2-digit numbers?  
- How can you divide larger numbers?  
- How can you solve problems involving division of larger numbers?  
- How do I identify missing information in a word problem?

### Essential Questions
- Using Patterns to Divide (Lesson 5.1)  
- Estimating Quotient with 2-Digit Divisors (Lesson 5.2)  
- Connecting Models and Symbols (Supplemental Lesson 5.3A)  
- Multiple-Step Problems (Lesson 5.3)  
- Dividing by Multiples of 10 (Lesson 5.4)  
- 1-Digit Quotients (Lesson 5.5)  
- 2-Digit Quotients (Lesson 5.6)  
- Estimating and Dividing with Greater Numbers (Lesson 5.7)  
- Missing or Extra Information (Lesson 5.8)

### Content
- Find the quotients of division problems who dividends and divisors are multiples of 10, where the division involves a basic fact  
- Use estimation to find approximate solutions to quotients with 2-digit divisors using compatible numbers  
- Use arrays and area models to model division  
- Find the hidden question, or questions, to solve multiple-step problems  
- Find quotients with a 2-digit divisor that is a multiple of 10  
- Find 1-digit quotients where the divisor is a 2-digit number  
- Divide a 3-digit number by a 2-digit number to find a 2-digit quotient  
- Solve problems involving division of numbers with 4 or 5-digits by 2-digit divisors with an estimate, or by using a calculator when the exact answer is needed  
- Determine which information is missing and identify extraneous information in problems

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

### Interventions / differentiated instruction
- Error Intervention  
- Differentiated Instruction – Intervention, On-Level, and Advanced  
- Leveled Homework – Reteach, Practice, and Enrichment  
- Center Activities  
- Special Needs  
- Below Level  
- ELL Strategies
### Inter-disciplinary Connections
- Altering word problems to reflect current classroom themes
- Theme based center activities
- Connecting reading strategies to problems solving

### Lesson resources / activities
- Pearsonsuccessnet.com
- E-tools
- Smartboard
- Student Text
- Workbook
- Teacher Text
- Manipulatives

### Common Core State Standards

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

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

<table>
<thead>
<tr>
<th>Cluster: Perform operations with multi-digit whole numbers and with decimals to hundredths</th>
<th>5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.NBT.6 Find whole number quotients of whole numbers with up to 4-digit dividends and 2-digit divisors, using the 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</td>
<td></td>
</tr>
</tbody>
</table>

### 21st Century Themes

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<thead>
<tr>
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</table>
# Pine Hill Public Schools
## Mathematics Curriculum

<table>
<thead>
<tr>
<th>Unit Title:</th>
<th>Take lessons from topic 7 to create unit: <strong>Multiplying Decimals</strong></th>
<th>Unit #: 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course or Grade Level:</td>
<td>5th grade</td>
<td>Length of Time: 2 weeks</td>
</tr>
<tr>
<td>Date Created:</td>
<td>01/18/12</td>
<td>BOE Approval Date:</td>
</tr>
</tbody>
</table>

## Pacing

- **Week #1** - Lessons 7.1, 7.2, & 7.3
- **Week #2** - Supplemental Lessons 7.4A & 7.4B, Lessons 7.4, 7.5, Review
- **Week #3** - Review & Topic Test

2013-2014 Dates: Nov. 25 through Dec. 10

## Essential Questions

- What is the rule for multiplying decimals by 10, 100, or 1,000?
- How do you multiply a decimal by a whole number?
- What are some ways to estimate products with decimals?
- How can number sense be used to determine the location of decimal points in decimal multiplication calculations?
- How can you multiply whole numbers and decimals?
- How can you multiply two decimals?
- How do you solve multiple-step problems?

## Content

- Multiplying Decimals by 10, 100, or 1,000 (Lesson 7.1)
- Multiplying a Decimal by a Whole Number (Lesson 7.2)
- Estimating the Product of a Decimal and a Whole Number (Lesson 7.3)
- Number Sense: Decimal Multiplication (Supplemental Lesson 7.4A)
- Models for Multiplying Decimals (Supplemental Lesson 7.4B)
- Multiplying Two Decimals (Lesson 7.4)
- Multiple-Step Problems (Lesson 7.5)

## Skills

- Mentally multiply decimals by 10, 100, and 1,000
- Use a standard algorithm to multiply a whole number and a decimal
- Use rounding and compatible numbers to estimate products of whole numbers and decimals. Identify estimates as overestimates or underestimates
- Use number sense and place value to multiply decimals
- Find products of whole numbers and decimals to 10 thousandths
- Use the standard algorithm to multiply decimals by decimals
- Mentally divide decimals by 10, 100, or 1,000
- Learn how to use reasoning to correctly place the decimal point in a quotient
- Use the standard algorithm to divide a decimal by a whole number
- Use compatible numbers to estimate quotients of decimals and whole numbers
- Use the standard algorithm to divide decimals by decimals
- Use multiple-steps to solve a variety of problems

## Assessments

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

## Interventions / differentiated instruction

- Error Intervention
- Differentiated Instruction – Intervention, On-Level, and Advanced
- Leveled Homework – Reteach, Practice, and Enrichment
- Center Activities
- Special Needs
- Below Level
- ELL Strategies
### Interdisciplinary Connections
- Altering word problems to reflect current classroom themes
- Theme based center activities
- Connecting reading strategies to problems solving

### Lesson resources / activities
- Pearsonsuccessnet.com
- E-tools
- Smartboard
- Student Text
- Workbook
- Teacher Text
- Manipulatives

### Common Core State Standards

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

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

| Cluster: Understand the place value system | 5.NBT.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 |
| Perform operations with multi-digit whole numbers and with decimals to hundredths | 5.NBT.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 ten. Use whole number exponents to denote powers of 10. |
| | 5.NBT.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

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| **Pine Hill Public Schools**  
| **Mathematics Curriculum**  
| **Unit Title:** Take lessons from topic 7 to create unit: **Dividing Decimals**  
| **Unit #: 7**  
| **Course or Grade Level:** 5th grade  
| **Length of Time:**  
| **Date Created:** 01/18/12  
| **BOE Approval Date:** 1 week, 2 days  

| **Pacing**  
| Week #1- Lesson 7.5, Supplemental lesson 7.6A, & lesson 7.6  
| Week #2- Lessons 7.7, 7.8, Review & Topic Test  
| 2013-2014 Dates: Dec. 11 through Dec. 20  
| **Daily Warm-up: Windows/Test Prep**  
| **Essential Questions**  
| • How can you divide decimals by 10, 100, and 1,000?  
| • How can you use reasoning to correctly place the decimal point in the quotient?  
| • How do you divide a decimal by a whole number?  
| • How can you estimate quotients with decimals?  
| • How can you divide a decimal by a decimal?  
| **Content**  
| • Dividing Decimals by 10, 100, or 1,000 (Lesson 7.5)  
| • Number Sense: Decimal Division (Supplemental Lesson 7.6A)  
| • Dividing a Decimal by a Whole Number (Lesson 7.6)  
| • Estimation: Decimals Divided by Whole Numbers (Lesson 7.7)  
| • Dividing a Decimal by a Decimal (Lesson 7.8)  
| **Skills**  
| • Mentally multiply decimals by 10, 100, and 1,000  
| • Use a standard algorithm to multiply a whole number and a decimal  
| • Use rounding and compatible numbers to estimate products of whole numbers and decimals. Identify estimates as overestimates or underestimates  
| • Use number sense and place value to multiply decimals  
| • Find products of whole numbers and decimals to 10 thousandths  
| • Use the standard algorithm to multiply decimals by decimals  
| • Mentally divide decimals by 10, 100, or 1,000  
| • Learn how to use reasoning to correctly place the decimal point in a quotient  
| • Use the standard algorithm to divide a decimal by a whole number  
| • Use compatible numbers to estimate quotients of decimals and whole numbers  
| • Use the standard algorithm to divide decimals by decimals  
| • Use multiple-steps to solve a variety of problems  
| **Assessments**  
| • Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving  
| • Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark  
| **Interventions / differentiated instruction**  
| • Error Intervention  
| • Differentiated Instruction – Intervention, On-Level, and Advanced  
| • Leveled Homework – Reteach, Practice, and Enrichment  
| • Center Activities  
| • Special Needs  
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| • ELL Strategies  
| **Inter-disciplinary Connections**  
| • Altering word problems to reflect current classroom themes  
| • Theme based center activities  
| • Connecting reading strategies to problems solving
### Lesson resources / activities
- Pearsonsuccessnet.com
- E-tools
- Smartboard
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- Manipulatives

### Common Core State Standards

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

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

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#### Math Practices:
- Make sense of problems and persevere in solving them
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## Unit Title:
Take lessons from topic 6 to create unit: **Numerical Expressions, Patterns, and Relations**

### Course or Grade Level:
5th grade

### Length of Time:
2 weeks, 3 days

### Date Created:
01/18/12

### BOE Approval Date:

## Pacing

| Week #1 | Lessons 6.1 & 6.2
| Week #2 | Lesson 6.3, Supplemental Lesson 6.4A, Lessons 6.4, 6.5 & CC Edition On-line lesson 8.3
| Week #3 | Supplemental Lessons 6.6A, 6.6B, 6.6C, and Lesson 6.6, Review
| Week #4 | Topic Test
| 2013-2014 Dates: Jan. 2 through Jan. 21 |

### Daily Warm-up: Windows/Test Prep

## Essential Questions
- How can you translate words into expressions?
- How can you use algebraic expressions to describe relationships?
- How can write and evaluate expressions with variables?
- How can you find the relationship between two sequences?
- How can you use distributive property to write two equal expressions?
- How can you evaluate a numerical expression containing more than one operation?
- How can you use the order of operations to evaluate expressions with decimals?
- How can you find a rule and write an addition and subtraction expression?
- How can you find a rule and write a multiplication and division expression?
- How can you act out a problem and use reasoning to solve it?

## Content
- Variables and Expressions (Lesson 6.1)
- Patterns and Expressions (Lesson 6.2)
- More Patterns and Expressions (Lesson 6.3)
- Patterns: Extending Tables (Supplemental Lesson 6.4A)
- Distributive Property (Lesson 6.4)
- Order of Operations (Lesson 6.5)
- Simplifying Expressions (CC Edition On-line lesson 8.3)
- Evaluating Expressions (Supplemental Lesson 6.6A)
- Addition and Subtraction Expressions (Supplemental Lesson 6.6B)
- Multiplication and Division Expressions (Supplemental Lesson 6.6C)
- Act it Out and Use and Reasoning (Lesson 6.6)

## Skills
- Translate into algebraic expressions
- Use patterns to show relationships and evaluate algebraic expressions
- Write and evaluate expressions involving multiplication, addition, and subtraction
- Extend patterns in a table using given rules and then look for the relationship between corresponding terms in the sequences
- Use the distributive property to simplify expressions and solve equations
- Use given values for variables to evaluate numerical or algebraic expressions with three or more numbers and two or more operation
- Use the order of operations to evaluate expressions with whole numbers and decimals
- Study completed tables to determine a rule and write an expression
- Solve problems by showing how to act out the problem. Use information given in the problem to draw conclusions.

## Assessments
- Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving
- Summative: Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark
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- Below Level
- ELL Strategies

### Interdisciplinary Connections
- Altering word problems to reflect current classroom themes
- Theme based center activities
- Connecting reading strategies to problems solving

### Lesson resources / activities
- Pearsonsofficenet.com
- E-tools
- Smartboard
- Student Text
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- Manipulatives

## Common Core State Standards

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

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

**Cluster: Write and interpret numerical expressions**
- 5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols
- 5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them
- 5.OA.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.

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

**Cluster: Perform operations with multi-digit whole numbers and with decimals to hundredths**
- 5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm

**Math Practices:**
- Make sense of problems and persevere in solving them
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# Pine Hill Public Schools
## Mathematics Curriculum

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<tr>
<th>Unit Title:</th>
<th>Take lessons from topics 9 &amp; 10 to create unit: <strong>Adding and Subtracting Fractions</strong></th>
<th>Unit #: 9</th>
</tr>
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<tbody>
<tr>
<td>Course or Grade Level:</td>
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<tr>
<td>Pacing</td>
<td>Week #1- Lessons 9.4 &amp; 9.7 &amp; Supplemental Lesson 10.1A</td>
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<td></td>
<td>Week #3- Review &amp; Topic Test</td>
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<td>2013-2014 Dates: Jan. 22 through Feb. 4</td>
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<tr>
<td>Daily Warm-up:</td>
<td>Windows/Test Prep</td>
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<tr>
<td>Essential Questions</td>
<td><strong>How can you convert one fraction into an equivalent one?</strong></td>
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<tr>
<td></td>
<td><strong>How can you write a fraction in simplest form?</strong></td>
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<td><strong>How can you estimate the sum or difference of two fractions?</strong></td>
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<td><strong>How do find a common multiple of two numbers?</strong></td>
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<td><strong>How can you find common denominators for fractions with unlike denominators?</strong></td>
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<td><strong>How can you add fractions with unlike denominators?</strong></td>
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<td><strong>How can you subtract fractions with unlike denominators?</strong></td>
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<tr>
<td></td>
<td><strong>How can adding and subtracting fractions help you solve problems?</strong></td>
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<tr>
<td>Content</td>
<td><strong>Equivalent Fractions (Lesson 9.4)</strong></td>
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<td><strong>Fractions in Simplest Form (Lesson 9.7)</strong></td>
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<td><strong>Estimating Sums and Differences of Fractions(Supplemental Lesson 10.1A)</strong></td>
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<td><strong>Finding Common Denominators (CC Edition On-line Lesson 9.6)</strong></td>
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<td><strong>More Adding and Subtracting Fractions (CC Edition On-line Lesson 9.9)</strong></td>
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<tr>
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<td><strong>Identify fractions that are equivalent. Find fractions equivalent to a given fraction using computational procedures</strong></td>
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<td><strong>Identify fraction that are in simplest form and find the simplest form of a fraction</strong></td>
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<td><strong>Use a number line to estimate sums and differences of fractions.</strong></td>
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<td><strong>Determine common multiples and least common multiples of numbers</strong></td>
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<td><strong>Use models and computational procedures to add and subtract fractions with unlike denominators</strong></td>
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<td><strong>Use models and computational procedures to subtract fractions with unlike denominators</strong></td>
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<td><strong>Solve problems involving addition and subtraction of fractions</strong></td>
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<tr>
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<td>5.NF.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 fraction with like denominators</td>
</tr>
<tr>
<td>5.NF.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.</td>
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| • Make sense of problems and persevere in solving them  
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• 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 |

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# Mathematics Curriculum

## Unit Title:
Take lessons from topics 9 & 10 to create unit: **Adding and Subtracting Mixed Numbers**

## Course or Grade Level:
5th grade

## Length of Time:
1 week, 4 days

## Date Created:
01/18/12

## BOE Approval Date:

## Pacing
- **Week #1** - Lesson 9.3, CC Edition On-line Lesson 10.2, & Supplemental Lesson 10.5A
- **Week #2** - Lessons 10.5, 10.6, Supplemental Lesson 10.7A, Lesson 10.7
- **Week #3** - Review & Topic Test

2013-2014 Dates: Feb. 5 through Feb. 19

**Daily Warm-up: Windows/Test Prep**

## Essential Questions
- How are mixed numbers and improper fractions related?
- How can you use a number line to round fractions and mixed numbers to estimate their sums and differences?
- How do use models to add mixed numbers?
- How can you add mixed numbers?
- How can you subtract mixed numbers?
- How can you add and subtract mixed numbers to solve problems?
- How can the strategy try, check, and revise be used to help you solve problems?

## Content
- Mixed Numbers and Improper Fractions (Lesson 9.3)
- Estimating Sums and Differences of Mixed Numbers (CC Edition On-line Lesson 10.2)
- Modeling Addition and Subtraction of Mixed Numbers (Supplemental Lesson 10.5A)
- Adding Mixed Numbers (Lesson 10.5)
- Subtracting Mixed Numbers (Lesson 10.6)
- More Adding and Subtracting Mixed Numbers(Supplemental Lesson 10.7A)
- Problem Solving: Try, Check, and Revise (Lesson 10.7)

## Skills
- Express fractions greater than 1 as mixed numbers or improper fractions
- Estimate sums and differences of mixed numbers by rounding to the nearest whole number
- Use models to add and subtract mixed numbers
- Use models and computational procedures to add mixed numbers
- Use model and computational procedures to subtract mixed numbers
- Solve more complex problems involving the addition and subtraction of mixed numbers
- Use three steps- try, check, and revise- in order to solve problems

## Assessments
- **Formative** : Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving
- **Summative** : Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark

## Interventions / differentiated instruction
- Error Intervention
- Differentiated Instruction – Intervention, On-Level, and Advanced
- Leveled Homework – Reteach, Practice, and Enrichment
- Center Activities
- Special Needs
- Below Level
- ELL Strategies

## Inter-disciplinary Connections
- Altering word problems to reflect current classroom themes
- Theme based center activities
- Connecting reading strategies to problems solving
**Lesson resources / activities**
- Pearsonsuccessnet.com
- E-tools
- Smartboard
- Student Text
- Workbook
- Teacher Text
- Manipulatives

**Common Core State Standards**

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

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

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

| Cluster: Perform operations with multi-digit whole numbers and with decimals to hundredths | 5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm |

**Math Practices:**
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## Pine Hill Public Schools Mathematics Curriculum

<table>
<thead>
<tr>
<th>Unit Title: Take lessons from topic 11 to create unit: Multiplying and Dividing Fractions and Mixed Numbers</th>
<th>Unit #: 11</th>
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<tbody>
<tr>
<td><strong>Course or Grade Level:</strong> 5th grade</td>
<td><strong>Length of Time:</strong> 2 weeks, 2 days</td>
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### Pacing
- **Week #1:** Lesson 11.1 & Supplemental Lesson 11.2A
- **Week #2:** Lesson 11.2, Supplemental Lesson 11.3A, Lesson 11.3, Supplemental Lesson 11.4A, & Lesson 11.4
- **Week #3:** Supplemental Lesson 11.5A, Lesson 11.5, Review & Test

**2013-2014 Dates:** Feb. 20 through Mar. 6

### Daily Warm-up: Windows/Test Prep

### Essential Questions
- How can you multiply fractions and whole numbers?
- How can you use compatible numbers to estimate with fractions?
- How can you multiply fractions?
- How can you find the area of a rectangle?
- How can you multiply mixed numbers?
- How does multiplying by a fraction change the second factor?
- How do divide a whole number by a fraction?
- How can you model dividing a unit fraction by a whole number?
- How can drawing a picture and writing an equation help you solve a problem?

### Content
- Multiplying Fractions and Whole Numbers (Lesson 11.1)
- Estimating Products (Supplemental Lesson 11.2A)
- Multiplying Two Fractions (Lesson 11.2)
- Area of a Rectangle (Supplemental Lesson 11.3A)
- Multiplying Mixed Numbers (Lesson 11.3)
- Multiplication as Scaling (Supplemental Lesson 11.4A)
- Relating Division to Multiplication of Fractions (Lesson 11.4)
- Dividing Unit Fractions by Non-Zero Whole Numbers (Supplemental Lesson 11.5A)
- Draw a Picture and Write an Equation (Lesson 11.5)

### Skills
- Multiply a fraction by a whole number
- Use compatible numbers and rounding to estimate with fractions
- Give the product of two fractions
- Learn how to find the area of rectangles
- Multiply mixed numbers
- Compare the size of the product to the size of one factor without multiplying as they begin to consider multiplication as scaling
- Divide whole numbers by fractions
- Discover the inverse relationship between multiplication and division that will help them to divide unit fractions by whole numbers
- Use diagrams and write equations to solve problems

### Assessments
- **Formative:** Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving
- **Summative:** Daily Spiral Review; Placement Test; Mid-Year Benchmark; End of Year Benchmark

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<td>PearsonSuccessNet.com</td>
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<td>E-tools</td>
<td>Domain (name and #): 5NF Number and Operations - Fractions</td>
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<tr>
<td>Smartboard</td>
<td>5.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction</td>
</tr>
<tr>
<td>Student Text</td>
<td>5.NF.4a 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 \frac{q}{b})</td>
</tr>
<tr>
<td>Workbook</td>
<td>5.NF.4b 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</td>
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<td>Teacher Text</td>
<td>5.NF.5 Interpret multiplication as scaling (resizing) by:</td>
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<td></td>
<td>▪ 5.NF.5a Comparing the size of a product to the product to the size of one factor on the basis of the size of the other factor, without performing the indicated</td>
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<td>▪ 5.NF.5b 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 principal of fraction equivalence (a/b = (n \times a)/(n \times b)) to the effect of multiplying (a/b) by 1</td>
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<td>Manipulatives</td>
<td>5.NF.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</td>
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<td>5.NF.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions</td>
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<td>5.NF.7a Interpret division of a unit fraction by a non-zero whole number, a compute such quotients</td>
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<td>5.NF.7b Interpret division of a whole number by a unit fraction, and compute such quotients</td>
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<td>5.NF.7c 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</td>
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<td>Unit Title:</td>
<td>Take Lessons from topic 13 to create unit: <strong>Volume of Solids</strong></td>
</tr>
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<td>Daily Warm-up:</td>
<td>Windows/Test Prep</td>
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<tr>
<td>Essential Questions</td>
<td>• How do you describe a solid figure? &lt;br&gt; • How can you use a 2-dimensional shape to represent a 3-dimensional solid? &lt;br&gt; • How can you get information about a solid from different views? &lt;br&gt; • How can you use models to find the volume of a rectangular prism? &lt;br&gt; • How do you find the volume of a rectangular prism? &lt;br&gt; • How can you use volume formulas to solve problems? &lt;br&gt; • How can you find the area of an irregular shape? &lt;br&gt; • How can you use a simpler problem to solve another problem?</td>
</tr>
<tr>
<td>Content</td>
<td>• Solids (Lesson 13.1) &lt;br&gt; • Views of Solids (Lesson 13.2) &lt;br&gt; • Models and Volume(Supplemental Lesson 13.5a) &lt;br&gt; • Volume (Lesson 13.5) &lt;br&gt; • Combining Volume(Supplemental Lesson 13.6a) &lt;br&gt; • Irregular Shapes and Solids (Lesson 13.6) &lt;br&gt; • Use Objects and Solve a Simpler Problem (Lesson 13.7)</td>
</tr>
<tr>
<td>Skills</td>
<td>• Identify solid figures according to faces, edges, and vertices &lt;br&gt; • Identify a 2-dimensional representation (net) of a solid &lt;br&gt; • Identify different views of a solid &lt;br&gt; • Determine the volume of rectangular solids &lt;br&gt; • Count cubic units and use formulas to find the volume of rectangular prisms &lt;br&gt; • Find volumes of irregular solids &lt;br&gt; • Find the areas and volumes of irregular shapes and solids &lt;br&gt; • Use objects to act out and break apart problems into simpler ones in order to reach a solution</td>
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### Lesson resources / activities
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### Common Core State Standards

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

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

<table>
<thead>
<tr>
<th>Cluster: Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition</th>
<th>5.MD.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.MD.3a 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</td>
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<td></td>
<td>5.MD.3b 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</td>
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<td>5.MD.4 Measure volumes by counting unit cubes, using cubic cm, cubic in., cubic ft., and improvised units</td>
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<td>5.MD.5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems, involving volume</td>
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<td></td>
<td>5.MD.5a 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</td>
</tr>
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<td>5.MD.5b 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 mathematical problems</td>
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<td>5.MD.5c 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</td>
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# Pine Hill Public Schools
## Mathematics Curriculum

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<tr>
<th>Unit Title:</th>
<th>Take lessons from topic 14 to create unit: <strong>Units of Measure</strong></th>
<th>Unit #: 13</th>
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<tbody>
<tr>
<td>Course or Grade Level:</td>
<td>5&lt;sup&gt;th&lt;/sup&gt; grade</td>
<td>Length of Time: 1 week</td>
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## Pacing
- Week #1- Lesson 14.1
- Week #2- Lessons 14.2, 14.3, 14.4 & 14.5, Review
- Week #3- Topic Test
- 2013-2014 Dates: Mar. 21 through Mar. 31

## Daily Warm-up: Windows/Test Prep

## Essential Questions
- How can you measure capacity in customary units?
- How can you measure capacity in metric units?
- How do you measure an object’s mass?
- How do you convert from one unit of customary length to another?
- How do you convert from one unit of metric length to another?

## Content
- Customary Units of Capacity (Lesson 14.1)
- Metric Units of Capacity (Lesson 14.2)
- Units of Weight and Mass (Lesson 14.3)
- Converting Customary Units (Lesson 14.4)
- Converting Metric Units (Lesson 14.5)

## Skills
- Use a variety of customary units to measure liquid volume
- Use metric units to measure liquid volume
- Use units of mass and weight to determine the amount of matter an object has and how heavy or light an object is
- Convert customary units of measure using multiplication and division
- Convert metric units of measure using multiplication and division

## Assessments
- Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving
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## Common Core State Standards
Grade or Conceptual Category (HS only): Fifth

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

<table>
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<tr>
<th>Cluster: Convert like measurement units within a given measurement system</th>
<th>5.MD.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.</th>
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Math Practices:
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## Pine Hill Public Schools
### Mathematics Curriculum

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<th><strong>Unit Title:</strong></th>
<th>Take lessons from topic 18 to create unit: <strong>Data</strong></th>
<th><strong>Unit #:</strong> 14</th>
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<td><strong>Length of Time:</strong> 1 week, 2 days</td>
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### Pacing
- **Week #1:** Lesson 18.1, Supplemental Lessons 18.2A, 18.2B, Lesson 18.2
- **Week #2:** Lesson 18.9, Review & Topic Test
- 2013-2014 Dates: Apr. 1 through Apr. 9

### Essential Questions
- How can you display the data collected in a survey?
- How do you choose an appropriate graph to display a set of data?
- What kind of data can be displayed using a line plot?
- What would be an appropriate sample size?
- How do you make and interpret a double-bar graph?
- How do you choose the best graph to display data?

### Content
- Data from Surveys (Lesson 18.1)
- Making Line Plots (Supplemental Lesson 18.2A)
- Measurement Data (Supplemental Lesson 18.2B)
- Bar Graphs and Picture Graphs (Lesson 18.2)
- Problem Solving: Make a Graph (Lesson 18.9)

### Skills
- Collect data and record data in frequency tables and line plots. Interpret the results.
- Learn how to make a line plot from data in a frequency table.
- Learn how to use the information in a line plot to solve problems involving the data.
- Make and interpret bar graphs, double-bar graphs, and picture graphs.
- Make a line graph from a set of ordered pairs. Students read and interpret the line graph.
- Students use place value to organize data in a stem-and-leaf plot.
- Make an interpret histograms.
- Complete circle graphs and interpret data given in circle graphs.
- Find the mean of data sets.
- Find the median, mode, and range of data sets.
- Read, interpret, and make various types of graphs to solve problems.

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

### Interventions / differentiated instruction
- Error Intervention
- Differentiated Instruction – Intervention, On-Level, and Advanced
- Leveled Homework – Reteach, Practice, and Enrichment
- Center Activities
- Special Needs
- Below Level
- ELL Strategies

### Interdisciplinary Connections
- Altering word problems to reflect current classroom themes
- Theme based center activities
- Connecting reading strategies to problems solving

### Lesson resources / activities
- Pearsonsuccessnet.com
- E-tools
- Smartboard
- Student Text
### Common Core State Standards

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

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

#### Cluster: Represent and interpret data

5.MD.2 Make a line plot to display a data set of measurements in fractions of a unit (1/2, ¼, 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 distributed equally.*

**Math Practices:**
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**21st Century Themes**

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<tr>
<td><strong>Unit Title:</strong> Take lessons from topic 8 to create unit: Classifying Plane Figures</td>
<td><strong>Unit #: 15</strong></td>
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<td><strong>Course or Grade Level:</strong> 5th grade</td>
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**Pacing**
- Week #1- Lessons 8.2 & 8.3
- Week #2- Lessons 8.4 & 8.5, Supplemental Lessons 8.6A & 8.6B, Lesson 8.6; (no review or topic test)
- 2013-2014 Dates: Apr. 10 through Apr. 17

**Daily Warm-up:** Windows/Test Prep: Include mini-lessons from topic 12- 12.3 Perimeter; 12.4 Area of Squares and Rectangles; 12.5 Area of Parallelograms (all fourth grade standards now)

**Essential Questions**
- How can you draw and classify angles?
- How do you classify polygons?
- How do you classify triangles?
- How do you classify quadrilaterals?
- Which shapes are special cases of another shape?
- How are special quadrilaterals related to each other?
- How can you test generalizations?

**Content**
- Measuring and Classifying Angles (Lesson 8.2)
- Polygons (Lesson 8.3)
- Triangles (Lesson 8.4)
- Quadrilaterals (Lesson 8.5)
- Special Quadrilaterals(Supplemental Lesson 8.6A)
- Classifying Quadrilaterals(Supplemental Lesson 8.6B)
- Make and Test Generalizations (Lesson 8.6)

**Skills**
- Measure, draw, and classify angles
- Identify and classify polygons
- Identify and classify triangles
- Identify and classify quadrilaterals
- Learn about the properties of special quadrilaterals
- Sort a variety of quadrilaterals to develop the hierarchy or “family tree” for quadrilaterals
- Make and test generalizations of patterns in different examples

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

**Interventions / differentiated instruction**
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**Inter-disciplinary Connections**
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- Theme based center activities
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**Lesson resources / activities**
- PearsonSuccessNet.com
- E-tools
- Smartboard
- Student Text
### Common Core State Standards

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

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

#### Cluster: Classify two-dimensional figures into categories based on their properties

- 5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category
- 5.G.4 Classify two-dimensional figures in a hierarchy based on properties

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#### Mathematics Curriculum

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<th>Unit Title:</th>
<th>Take lessons from topic 17 to create unit: Coordinate Geometry</th>
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<tr>
<td>Course or Grade Level:</td>
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<td>Length of Time: 2 weeks, 2 days</td>
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#### Pacing
- Week #1- Lessons 17.2, Supplemental Lessons 17.4A, 17.4B, 17.4C combined with NJ ASK Review
- Week #2- NJ ASK Review; **NJ ASK 5/5 through 5/8**
- Week #3- Lesson 17.5 Review & Test
- 2013-2014 Dates: Apr. 28 through May 14

#### Essential Questions
- How can you describe the location of a point on a coordinate plane?
- How can use use the ordered pairs of the end points of vertical and horizontal line segments to find the length of the line segments?
- How can you use coordinate grids to show mathematical relationships?
- How can you work backward to solve a problem?

#### Content
- Ordered Pairs (Lesson 17.2)
- Distances on a Coordinate Plane (Supplemental Lesson 17.4A)
- Patterns and Graphing (Supplemental Lesson 17.4B)
- More Patterns and Graphing (Supplemental Lesson 17.4C)
- Problem Solving: Work Backward (Lesson 17.5)

#### Skills
- Identify and graph points on a coordinate plane
- Find the distance between two points by using ordered pairs
- Create and interpret coordinate graphs
- Use coordinate graphs to explore the relationship between two rules
- Work backward to solve a problem

#### Assessments
- Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving
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### Common Core State Standards
5.OA.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.

5.G.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 zero on each line at a given point in the plane located by using an order 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 coordinates correspond (e.g. x-axis and x-coordinate, y-axis and y-coordinate).

5.G.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, interpret coordinate values of points in the context of the situation.
### Pine Hill Public Schools
#### Mathematics Curriculum

**Unit Title:** Ratio and Percent - lessons from topic 16 (Prepares for Sixth Grade: no longer in the fifth grade standards)

**Unit #:** 17

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

**Length of Time:** 1 week, 2 days

**Date Created:** 01/18/12

**BOE Approval Date:**

#### Pacing

- **Week #1:** Lessons 16.1 & 16.2
- **Week #2:** Lessons 16.3, 16.4, & 16.5, Review & Topic Test
  
  2013-2014 Dates: May 15 through May 23

**Daily Warm-up: Windows/Test Prep**

#### Essential Questions

- What are ratios and when are they equal?
- What does percent mean?
- How are percents related to fractions and decimals?
- How can you find a percent of a given number?
- How can you solve percent problems by making a table and looking for a pattern?

#### Content

- Understanding Ratios (Lesson 16.1)
- Understanding Percent (Lesson 16.2)
- Percent, Fractions, and Decimals (Lesson 16.3)
- Finding Percent of a Whole Number (Lesson 16.4)
- Problem Solving: Make a Table and Look for a Pattern (Lesson 16.5)

#### Skills

- Read and write ratios and generate equal ratios
- Write a percent for a given situation and create situations for given percents
- Write numbers as fractions, decimals, and percents
- Find the given percent of a whole number
- Make tables and find a pattern to solve problems involving percent

#### Assessments

- Formative: Daily Quick Check; Topic Test; Anecdotal Records; Teacher Observation; Independent Practice; Problem Solving
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#### Common Core State Standards
**Grade or Conceptual Category (HS only): Sixth**

**Domain (name and #): Ratios and Proportional Relationships**

| Cluster: Understand ratio concepts and use ratio reasoning to solve problems | 6.RP.1 Understand the concept of ratio and use ratio language to describe a ratio relationship between two quantities.  
6.RP.3 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 |

**Domain (name and #): The Number System**

| Cluster: Apply and extend previous understandings of numbers to the system of rational numbers | 6.NS.6 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 |

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## Pine Hill Public Schools
### Mathematics Curriculum

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<tr>
<th>Unit Title:</th>
<th>Solving and Writing Equations and Inequalities – Lessons from topic 15 (Prepares for Sixth Grade: no longer in the fifth grade standards)</th>
<th>Unit #: 18</th>
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<tr>
<td><strong>Pacing</strong></td>
<td>Week #1 - Lessons 15.1, 15.2, 15.3, &amp; 15.4</td>
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<td>Week #2 - Lesson 15.5, Review &amp; Topic Test; End-of-Year Test</td>
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<td>Week #3 - End-of-Year Test</td>
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<td><strong>Essential Questions</strong></td>
<td>• How can you use addition and subtraction to solve an equation?</td>
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<td>• How can an equation be solved using multiplication and division?</td>
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<td>• How do you graph an inequality on a number line?</td>
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<td>• How can you write a rule for a pattern to complete a table?</td>
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<td>• How do you draw a picture and write an equation to solve a problem?</td>
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<td><strong>Content</strong></td>
<td>• Solving Addition and Subtraction Equation (Lesson 15.1)</td>
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<td>• Solving Multiplication and Division Equations (Lesson 15.2)</td>
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<td>• Inequalities and the Number Line (Lesson 15.3)</td>
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<td>• Problem Solving: Draw a Picture and Write an Equation (Lesson 15.5)</td>
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<td>• Use a number line to graph solutions of an inequality</td>
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<td>• Complete a table of values for an equation or write an equation to describe the relationship between pairs of numbers in a table</td>
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<td>• Draw diagrams or pictures and write equations to solve problems</td>
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**Common Core State Standards**
Grade or Conceptual Category (HS only): Sixth

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<th>Domain (name and #): 6.EE Expressions and Equations</th>
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<tr>
<td>Cluster: Apply and extend previous understandings of arithmetic to algebraic expressions</td>
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<tr>
<td>6.EE.1 Write and evaluate numerical expressions involving whole-number exponents</td>
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<td>6.EE.2 Write, read, and evaluate expressions in which letters stand for numbers</td>
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<td>6.NS.7 Understand ordering and absolute value of rational numbers</td>
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