



## Sixth Grade Math Chapter 3 Unit Plan

Time: (Weeks/Days)	Chapter 3: Algebraic Expressions and Properties <b><u>Essential Standards Lessons:</u></b> 1, 2, 3, 4 <ul style="list-style-type: none"> <li>• <b><u>6.EE.2abc, 6.EE.3</u></b></li> </ul>			
<b>Big Ideas:</b> 3.1: Write and evaluate an algebraic expression containing a variable 3.2: Write an algebraic expression that represents a verbal phrase 3.3: Use the Commutative and Associative Properties to show that expressions are equivalent 3.4: Use the Distributive Property with algebra to multiply numbers with more than one digit	<b>Essential Question(s):</b> How can you write and evaluate an expression that represents a real-life problem? How can you write an expression that represents an unknown quantity? Does the order in which you perform an operation matter? How do you use mental math to multiply two numbers?			
<b>Standards for Mathematical Practice:</b> 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.	<b>Student Learning Targets:</b> 1. I can write expressions that record operations with numbers and with letters that stand for numbers. (6.EE.2a) 2. I can identify the parts of an expression using mathematical terms. (6.EE.2b) 3. I can view one or more parts of an expression as a single entity. (6.EE.2b) 4. I can evaluate expressions at specific values of their variables. (6.EE.2c) 5. I can evaluate expressions that arise from formulas used in real-world problems. (6.EE.2c) 6. I can perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order. (6.EE.2c) 7. I can apply the properties of operations. (6.EE.3) 8. I can generate equivalent expressions. (6.EE.3)			
<b>Standards</b> (Essential Standards are bold and underlined)	<b>Vocabulary</b>	<b>Skills</b>	<b>Activities (Resources)</b>	<b>Assessment</b>
6.EE.1: Write and evaluate numerical expressions involving whole-number exponents.			3.1: Algebraic Expressions <ul style="list-style-type: none"> <li>• Textbook Lesson pgs. 112 (Examples: 2ab, 5b)</li> <li>• Textbook Exercises pgs. 115-117 (10-13, 16-24, 42, 47-48, 55)</li> <li>• RPJ pg. 56 (9-11, 15)</li> </ul> <u>Additional Resources</u>	Suggested Common Formative Assessment: <ul style="list-style-type: none"> <li>• After Learning Target 1</li> <li>• After Learning Targets 2 &amp; 3</li> <li>• After Learning Targets 4 &amp; 5</li> </ul>

			<ul style="list-style-type: none"> <li>Resources by Chapter pg. 87 (3); pg. 88 (1-3, 10, 13); pg. 89 (3-6), pg. 90 (1-4)</li> </ul>	<ul style="list-style-type: none"> <li>After Learning Targets 6</li> <li>After Learning Targets 7 &amp; 8</li> </ul>
<p><b>6.EE.2: Write, read, and evaluate expressions in which letters stand for numbers.</b></p> <p>b. <b><u>Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity.</u></b></p> <p><a href="#">Link to Sample Test Item</a></p>	<p>Algebraic expression Sum Term Product Factor Quotient Coefficient Constant Units</p>	<ul style="list-style-type: none"> <li>Understand expressions</li> <li>Vocabulary</li> </ul>	<p>3.1: Algebraic Expressions</p> <ul style="list-style-type: none"> <li>Textbook Lesson pg. 112 (Example 1ab)</li> <li>Textbook Exercises pg. 115 (1, 8-15)</li> </ul> <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> <li>Resources by Chapter pg. 87 (1-3)</li> </ul> <p>3.2: Writing Expressions</p> <ul style="list-style-type: none"> <li>Textbook Activity pg. 118 (1e)</li> <li>Textbook Exercises pg. 122 (2)</li> </ul>	<p>Common Summative Assessment:</p> <ul style="list-style-type: none"> <li>Assessment Book Chapter Test A (pgs. 31-32) or Chapter Test B (pgs. 33-34)</li> </ul>
<p><b>6.EE.2: Write, read, and evaluate expressions in which letters stand for numbers.</b></p> <p>c. <b><u>Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).</u></b></p> <p><a href="#">Link to Sample Test Item</a></p>	<p>Variable Exponents</p>	<ul style="list-style-type: none"> <li>Order of operations</li> <li>Multiplication with exponents</li> <li>Understand multiplication of a coefficient and a specific value substituted for a variable <ul style="list-style-type: none"> <li>Example: evaluate <math>5w</math> when <math>w=3</math></li> </ul> </li> <li>Solving real-world math problems involving variables and exponents <ul style="list-style-type: none"> <li>Reading comprehension</li> <li>Multiple methods to solve problems</li> </ul> </li> </ul>	<p>3.1: Algebraic Expressions</p> <ul style="list-style-type: none"> <li>Textbook Activity pgs. 110-111 (1a, 2abcde)</li> <li>Textbook Lesson pgs. 113-114 (Example 3ab, 4, 5ab, 6a)</li> <li>Textbook Exercises pgs. 115-117 (3, 4-7, 25-51, 53, 54abcd, 55)</li> <li>RPJ pgs. 55-56 (all), 56 (1a), 58 (2abcde), 60 (all)</li> </ul> <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> <li>Resources by Chapter 87 (4-20), 88 (4-17), 89 (1-13), 90 (5-23)</li> </ul>	

			<p>3.2: Writing Expressions</p> <ul style="list-style-type: none"> <li>• Textbook Activity pg. 119 (2b)</li> <li>• Textbook Lesson pg. 121 (4b, 8)</li> <li>• Textbook Exercises pg. 123 (21b, 27-30, 31c, 32c, 33b)</li> <li>• RPJ pg. 63 (2b), pg. 64 (5-6)</li> </ul> <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> <li>• Resources by Chapter pg. 91 (1-6), pg. 93 (14-17, 19b), pg. 94 (13-16) pg. 96 (10-14)</li> </ul>	
<p><b><u>6.EE.2: Write, read, and evaluate expressions in which letters stand for numbers.</u></b></p> <p>a. <b><u>Write expressions that record operations with numbers and with letters standing for numbers.</u></b></p> <p><a href="#">Link to Sample Test Item</a></p>		<ul style="list-style-type: none"> <li>• Knowledge of signal words that coincide with mathematical operations</li> </ul>	<p>3.1: Algebraic Expressions</p> <ul style="list-style-type: none"> <li>• Textbook Activity pg. 110-111 (1ab, 2abcde)</li> <li>• Textbook Lessons pg. 112 (Example 2ab)</li> <li>• Textbook Exercises pg. 115-117 (4-7, 16-24, 52-53, 54cd, 55)</li> <li>• RPJ pg. 60 (10); pg.58-59 (2abcde), pg.64 (5-6, 7b), pg. 68 (7ab)</li> </ul> <p>3.2 Writing Expressions</p> <ul style="list-style-type: none"> <li>• Textbook Activity pgs. 118-119 (1abd, 2ab, 3)</li> <li>• Textbook Lesson pgs. 120-121 (Examples 1ab, 2abc, 3, 4a)</li> </ul>	

			<ul style="list-style-type: none"> <li>• Textbook Exercises pgs. 122-123 (1, 3-20, 21a, 22b, 27-30, 31b, 32ab, 33a, 34, 35)</li> <li>• RPJ pg. 61-63 (1abd, 2ab, 3)</li> </ul> <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> <li>• Resources by Chapter pg. 92 (1-6), pg. 93 (1-19a), pg. 94 (1-16, 17b)</li> </ul> <p>3.3 Properties of Addition and Multiplication</p> <ul style="list-style-type: none"> <li>• Textbook Exercises pg. 131 (27-28, 34a)</li> </ul> <p>3.4: The Distributive Property</p> <ul style="list-style-type: none"> <li>• Textbook Exercises pgs. 138-139 (36-38, 59-62, 64)</li> </ul> <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> <li>• Resources by Chapter pg. 105 (16, 23), pg. 106 (14, 15)</li> </ul> <p>3.4 (Extension) The Distributive Property</p> <ul style="list-style-type: none"> <li>• RPJ pg. 74 (17)</li> </ul> <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> <li>• Resources by Chapter pg. 87 (17-20); pg. 88 (1-3, 14-17), pg. 90 (1-4), pg. 96 (1-15)</li> </ul>	
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<p><b><u>6.EE.3: Apply the properties of operations to generate equivalent expressions.</u></b></p> <p><a href="#">Link to Sample Test Item</a></p>	<p>Commutative Property  Associative Property  Addition Property of Zero  Multiplication Property of Zero  Distributive Property  Equivalent Factoring</p>	<ul style="list-style-type: none"> <li>• Knowledge of the different properties</li> <li>• Addition</li> <li>• Subtraction</li> <li>• Multiplication</li> <li>• Division</li> <li>• Partial products</li> <li>• Combining like terms</li> </ul>	<p>3.3: Properties of Addition and Multiplication</p> <ul style="list-style-type: none"> <li>• Textbook Lesson pgs. 128-129 (all)</li> <li>• Textbook Exercises pgs. 130-131 (1-3, 11, 12-24, 25b, 26a, 29-33bc)</li> <li>• RPJ pg. 68 (3-6, 7b)</li> </ul> <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> <li>• Resources by Chapter pg. 99 (7-18), pg. 100 (1-15, 16b, 17), pg. 102 (7-14)</li> </ul> <p>3.4: The Distributive Property</p> <ul style="list-style-type: none"> <li>• Textbook Activity pgs. 132-133 (1ce, 3)</li> <li>• Textbook Lesson pgs. 134-136 (all)</li> <li>• Textbook Exercises pgs. 137-139 (2, 5-33, 34ac, 36-61, 62ab, 63ab, 64)</li> <li>• RPJ pgs. 69 (1ce), pg. 70-71 (3), p.72 (1-10ab)</li> </ul> <p>3.4 (EXTENSION): The Distributive Property</p> <p>Textbook</p> <ul style="list-style-type: none"> <li>• Textbook pgs. 140-141 (Example 1, 3)</li> <li>• RPJ pgs. 73 (all) 74 (11-16)</li> </ul> <p><u>Additional Resources</u></p>	
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<p>6.EE.4: Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them).</p>			<p>3.3: Properties of Addition and Multiplication</p> <ul style="list-style-type: none"> <li>Textbook Activity pgs. 126-127 (2a, 3a)</li> <li>Textbook Exercises pgs. 130-131 (4)</li> </ul> <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> <li>Resources by Chapter pg. 101 (all)</li> </ul> <p>3.4: The Distributive Property</p> <ul style="list-style-type: none"> <li>Textbook Activities pg. 132 (1de)</li> <li>Textbook Exercises pgs. 138-139 (35, 58, 65)</li> <li>RPJ pgs. 69 (1de)</li> </ul> <p><u>Additional Resources</u></p> <ul style="list-style-type: none"> <li>Resources by Chapter pg. 105 (15), pg. 106 (24)</li> </ul> <p>3.4: (Extension) Factoring Expressions</p> <ul style="list-style-type: none"> <li>Textbook pgs. 140-141 (Example 2)</li> </ul>	
<p>Reflect on CFAs - What adjustments should be made for the following year?</p>				