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Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.6.RP.1	<p>Understand the concept of a ratio and use ratio language to:</p> <ul style="list-style-type: none"> <li>Describe a ratio as a multiplicative relationship between two quantities.</li> <li>Model a ratio relationship using a variety of representations.</li> </ul>	Textbook	2: Relating Quantities	1: Ratios	1: It's All Relative: Introduction to Ratio and Ratio Reasoning pp. M2-7–M2-24
					2: Going Strong: Comparing Quantities to Solve Problems pp. M2-25–M2-36
					3: Oh, Yes, I Am the Muffin Man: Determining Equivalent Ratios pp. M2-37–M2-56
					4: A Trip to the Moon: Using Tables to Represent Equivalent Ratios pp. M2-57–M2-68
					5: They're Growing!: Graphs of Ratios pp. M2-69–M2-84
		6: One Is Not Enough: Using and Comparing Ratio Representations pp. M2-85–M2-98			
MATHia Software	2: Relating Quantities	1: Ratio Reasoning	1: Understanding Ratio Relationships		
NC.6.RP.2	Understand that ratios can be expressed as equivalent unit ratios by finding and interpreting both unit ratios in context.	Textbook	2: Relating Quantities	3: Unit Rates and Conversions	2: What Is the Best Buy?: Introduction to Unit Rates pp. M2-185–M2-198
NC.6.RP.3	<p>Use ratio reasoning with equivalent whole-number ratios to solve real-world and mathematical problems by:</p> <ul style="list-style-type: none"> <li>Creating and using a table to compare ratios.</li> <li>Finding missing values in the tables.</li> <li>Using a unit ratio.</li> <li>Converting and manipulating measurements using given ratios.</li> <li>Plotting the pairs of values on the coordinate plane.</li> </ul>	Textbook	2: Relating Quantities	1: Ratios	2: Going Strong: Comparing Quantities to Solve Problems pp. M2-25–M2-36
					3: Oh, Yes, I Am the Muffin Man: Determining Equivalent Ratios pp. M2-37–M2-56
					4: A Trip to the Moon: Using Tables to Represent Equivalent Ratios pp. M2-57–M2-68
					5: They're Growing!: Graphs of Ratios pp. M2-69–M2-84
					6: One Is Not Enough: Using and Comparing Ratio Representations pp. M2-85–M2-98
					3: Unit Rates and Conversions
		3: Seeing Things Differently: Multiple Representations of Unit Rates pp. M2-199–M2-208			

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.6.RP.3	<p>Use ratio reasoning with equivalent whole-number ratios to solve real-world and mathematical problems by:</p> <ul style="list-style-type: none"> <li>• Creating and using a table to compare ratios.</li> <li>• Finding missing values in the tables.</li> <li>• Using a unit ratio.</li> <li>• Converting and manipulating measurements using given ratios.</li> <li>• Plotting the pairs of values on the coordinate plane.</li> </ul>	Textbook	2: Relating Quantities	3: Unit Rates and Conversions	1: Many Ways to Measure: Using Ratio Reasoning to Convert Units pp. M2-165–M2-184
		MATHia Software	2: Relating Quantities	1: Ratio Reasoning	3: Equivalent Ratios 4: Multiple Representations Of Ratios
				2: Problem Solving and Ratio and Rate Reasoning	1: Problem Solving with Equivalent Ratios and Rates Using Tables 2: Problem Solving with Equivalent Ratios and Rates Using Double Number Lines 3: Problem Solving with Equivalent Ratios and Rates Using Graphs
				4: Rate Reasoning	1: Fractional Rates 2: Comparing Rates
				5: Ratio Reasoning to Convert Units	1: Converting Within Systems 2: Converting Between Systems
		NC.6.RP.4	<p>Use ratio reasoning to solve real-world and mathematical problems with percents by:</p> <ul style="list-style-type: none"> <li>• Understanding and finding a percent of a quantity as a ratio per</li> <li>• Using equivalent ratios, such as benchmark percents (50%, 25%, 10%, 5%, 1%), to determine a part of any given quantity.</li> <li>• Finding the whole, given a part and the percent.</li> </ul>	Textbook	2: Relating Quantities
MATHia Software	2: Relating Quantities			3: Introduction to Percent	1: Percent Models
					2: Fraction, Decimal, Percent Conversions
					3: Determining a Part Given a Whole
			4: Determining a Whole Give a Percent and a Part		

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.6.NS.1	Use visual models and common denominators to: <ul style="list-style-type: none"> <li>• Interpret and compute quotients of fractions.</li> <li>• Solve real-world and mathematical problems involving division of fractions.</li> </ul>	Textbook	1: Composing and Decomposing	2: Positive Rational Numbers	1: Thinking Rationally: Identifying and Ordering Rational Numbers pp. M1-71–M1-82
					2: Did You Get the Part?: Multiplying and Dividing with Fractions pp. M1-83–M1-92
		MATHia Software	1: Composing and Decomposing	3: Fraction Division	3: Yours IS to Reason Why!: Fraction by Fraction Division pp. M1-93–M1-106
					1: Representing Fraction Division
2: Interpreting Remainders using Models					
3: Developing the Fraction Division Algorithm					
4: Multiplying and Dividing Rational Numbers					
NC.6.NS.2	Fluently divide using long division with a minimum of a four-digit dividend and interpret the quotient and remainder in context.	Textbook	1: Composing and Decomposing	3: Decimals and Volume	4: Dividend in the House: Dividing with Volume and Surface Area pp. M1-165–M1-175
					MATHia Software
		4: Decimal Operations	5: Multiplying and Dividing Decimals		
			6: Decimal Products and Quotients		
NC.6.NS.3	Apply and extend previous understandings of decimals to develop and fluently use the standard algorithms for addition, subtraction, multiplication and division of decimals.	Textbook	1: Composing and Decomposing	3: Decimals and Volume	1: Length, Width, and Depth: Deepening Understanding of Volume pp. M1-115–M1-130
					2: Which Warehouse?: Volume Composition and Decomposition pp. M1-131–M1-142
					3: Breaking the Fourth Wall: Surface Area of Rectangular Prisms and Pyramids pp. M1-143–M1-164
					4: Dividend in the House: Dividing with Volume and Surface Area pp. M1-165–M1-175
		MATHia Software	1: Composing and Decomposing	4: Decimal Operations	1: Converting Fractions to Decimals
					2: Adding and Subtracting Decimals
					3: Decimal Sums and Differences
					4: Exploring Decimal Facts
5: Multiplying and Dividing Decimals					
6: Decimal Products and Quotients					

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>NC.6.NS.4</b>	Understand and use prime factorization and the relationships between factors to: <ul style="list-style-type: none"> <li>• Find the unique prime factorization for a whole number.</li> <li>• Find the greatest common factor of two whole numbers less than or equal to</li> <li>• Use the greatest common factor and the distributive property to rewrite the sum of two whole numbers, each less than or equal to 100.</li> <li>• Find the least common multiple of two whole numbers less than or equal to 12 to add and subtract fractions with unlike denominators.</li> </ul>	Textbook	1: Composing and Decomposing	1: Factors and Area	4: Searching for Common Ground: Common Factors and Common Multiples pp. M1-39–M1-50
					5: Composing and Decomposing Numbers: Least Common Multiple and Greatest Common Factor pp. M1-51–M1-60
<b>NC.6.NS.5</b>	Understand and use rational numbers to: <ul style="list-style-type: none"> <li>• Describe quantities having opposite directions or values.</li> <li>• Represent quantities in real-world contexts, explaining the meaning of 0 in each situation.</li> <li>• Understand the absolute value of a rational number as its distance from 0 on the number line to:                             <ul style="list-style-type: none"> <li>o Interpret absolute value as magnitude for a positive or negative quantity in a real-world context.</li> <li>o Distinguish comparisons of absolute value from statements about order.</li> </ul> </li> </ul>	Textbook	4: Moving Beyond Positive Quantities	1: Signed Numbers	1: Human Number Line: Introduction to Negative Numbers pp. M4-7–M4-22
					2: Magnificent Magnitude: Absolute Value pp. M4-23–M4-34
		MATHia Software	4: Beyond Positive Quantities	1: Integers	3: What's In a Name?: Rational Number System pp. M4-35–M4-46
			4: Moving Beyond Positive Quantities		1: Introduction to Negative Numbers
			3: Using Absolute Value		
<b>NC.6.NS.6</b>	Understand rational numbers as points on the number line and as ordered pairs on a coordinate plane.	MATHia Software	4: Beyond Positive Quantities	1: Integers	1: Introduction to Negative Numbers
<b>NC.6.NS.6a</b>	o Recognize opposite signs of numbers as indicating locations on opposite sides of 0 and that the opposite of the opposite of a number is the number itself. <ul style="list-style-type: none"> <li>o Find and position rational numbers on a horizontal or vertical number line.</li> </ul>	Textbook	4: Moving Beyond Positive Quantities	1: Signed Numbers	1: Human Number Line: Introduction to Negative Numbers pp. M4-7–M4-22
		MATHia Software	4: Beyond Positive Quantities	1: Integers	2: Representing Integers on Number Lines

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<b>NC.6.NS.6b</b>	On a coordinate plane: o Understand signs of numbers in ordered pairs as indicating locations in quadrants. o Recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. o Find and position pairs of rational numbers on a coordinate plane.	Textbook	4: Moving Beyond Positive Quantities	2: The Four Quadrants	1: Four Is Better Than One: Extending the Coordinate Plane pp. M4-57-M472	
				1: Signed Numbers	1: Human Number Line: Introduction to Negative Numbers pp. M4-7-M4-22	
		MATHia Software	4: Beyond Positive Quantities	2: The Coordinate Plane	1: Exploring Symmetry on the Coordinate Plane	1: Exploring Symmetry on the Coordinate Plane
					2: Identifying and Interpreting Ordered Pairs	2: Identifying and Interpreting Ordered Pairs
<b>NC.6.NS.7</b>	Understand ordering of rational numbers.	Textbook	4: Moving Beyond Positive Quantities	1: Signed Numbers	1: Human Number Line: Introduction to Negative Numbers pp. M4-7-M4-22	
					1: Signed Numbers	1: Human Number Line: Introduction to Negative Numbers pp. M4-7-M4-22
<b>NC.6.NS.7a</b>	Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.	Textbook	4: Moving Beyond Positive Quantities	1: Signed Numbers	1: Human Number Line: Introduction to Negative Numbers pp. M4-7-M4-22	
		MATHia Software	4: Beyond Positive Quantities	1: Integers	2: Representing Integers on Number Lines	
<b>NC.6.NS.7b</b>	Write, interpret, and explain statements of order for rational numbers in real-world contexts.	Textbook	4: Moving Beyond Positive Quantities	1: Signed Numbers	1: Human Number Line: Introduction to Negative Numbers pp. M4-7-M4-22	
		MATHia Software	4: Beyond Positive Quantities	1: Integers	3: Using Absolute Value	
<b>NC.6.NS.8</b>	Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	Textbook	4: Moving Beyond Positive Quantities	2: The Four Quadrants	1: Four Is Better Than One: Extending the Coordinate Plane pp. M4-57-M472	
					2: It's a Bird, It's a Plane... It's a Polygon on the Plane!: Graphing Geometric Figures pp. M4-73-M4-86	3: There Are Many Paths . . . : Problem Solving on the Coordinate Plane pp. M4-87-M4-111
		MATHia Software	4: Beyond Positive Quantities	2: The Coordinate Plane	4: Drawing Polygons on the Coordinate Plane	

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)	
NC.6.EE.1	Write and evaluate numerical expressions, with and without grouping symbols, involving whole-number exponents.	Textbook	3: Unknown Quantities	1: Expressions	1: Relationships Matter: Evaluating Numeric Expressions pp. M3-7–M3-22	
		MATHia Software	3: Determining Unknown Quantities	1: Numeric Expressions	5: Contrasting Addition and Subtraction with Multiplication and Division to Simplify Numeric Expressions	
					6: Using Order of Operations to Simplify Numeric Expressions with Four Operations	
					7: Using Order of Operations to Simplify Numeric Expressions with Parentheses and Exponents	
8: Using Order of Operations to Simplify Numeric Expressions						
NC.6.EE.2	<p>Write, read, and evaluate algebraic expressions.</p> <ul style="list-style-type: none"> <li>• Write expressions that record operations with numbers and with letters standing for numbers.</li> <li>• Identify parts of an expression using mathematical terms and view one or more of those parts as a single entity.</li> <li>• Evaluate expressions at specific values of their variables using expressions that arise from formulas used in real-world problems.</li> </ul>	Textbook	3: Unknown Quantities	1: Expressions	2: Into the Unknown: Introduction to Algebraic Expressions pp. M3-23–M3-34	
					3: Second Verse, Same as the First: Equivalent Expressions pp. M3-35–M3-52	
					5: DVDs and Songs: Using Algebraic Expressions to Analyze and Solve Problems pp. M3-67–M3-76	
		MATHia Software	3: Determining Unknown Quantities	1: Composing and Decomposing	1: Factors and Area	1: Taking Apart Numbers and Shapes: Writing Equivalent Expressions Using the Distributive Property pp. M1-7–M1-14
				1: Numeric Expressions	1: Expression Evaluation Using Whole Numbers (Positive values only)	
					2: Evaluating Two-Step Expressions with Whole Numbers	
2: Algebraic Expressions	1: Evaluating Multi-Step Expressions					
2: Evaluating Expressions with Multiple Variables						

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)		
<b>NC.6.EE.3</b>	Apply the properties of operations to generate equivalent expressions without exponents.	Textbook	1: Composing and Decomposing	1: Factors and Area	1: Taking Apart Numbers and Shapes: Writing Equivalent Expressions Using the Distributive Property pp. M1-7–M1-14		
			3: Unknown Quantities	1: Expressions	3: Second Verse, Same as the First: Equivalent Expressions pp. M3-35–M3-52 5: DVDs and Songs: Using Algebraic Expressions to Analyze and Solve Problems pp. M3-67–M3-76		
		MATHia Software	1: Composing and Decomposing	1: Number Properties	3: Determining Unknown Quantities	3: Equivalent Algebraic Expressions	1: Commutative and Associative Properties
							2: Exploring the Distributive Property with Numeric Expressions
			3: Using the Distributive Property with Numeric Expressions				
			3: Order of Operations				
			4: Simplifying Numeric Expressions				
			2: Exploring the Distributive Property with Algebraic Expressions				
		3: Contrasting Addition and Subtraction with Multiplication and Division to Simplify Algebraic Expressions					
		4: Using Order of Operations to Simplify Algebraic Expressions with Four Operations					
5: Using Order of Operations to Simplify Algebraic Expressions with Parentheses and Exponents							
6: Using Order of Operations to Simplify Algebraic Expressions							
<b>NC.6.EE.4</b>	Identify when two expressions are equivalent and justify with mathematical reasoning.	Textbook	3: Unknown Quantities	1: Expressions	4: Are They Saying the Same Thing?: Verifying Equivalent Expressions pp. M3-53–M3-66		
		MATHia Software	3: Determining Unknown Quantities	3: Equivalent Algebraic Expressions	1: Modeling Equivalent Algebraic Expressions		
<b>NC.6.EE.5</b>	Use substitution to determine whether a given number in a specified set makes an equation true.	Textbook	3: Unknown Quantities	2: Equations	1: First Among Equals: Reasoning with Equal Expressions pp. M3-87–M3-106		
		MATHia Software	3: Determining Unknown Quantities	5: Solving One-Step Equations	3: Using Substitution to Identify Solutions To Equations		



Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
NC.6.EE.6	Use variables to represent numbers and write expressions when solving a real-world or mathematical problem.	Textbook	3: Unknown Quantities	1: Expressions	5: DVDs and Songs: Using Algebraic Expressions to Analyze and Solve Problems pp. M3-67–M3-76
				2: Equations	2: Bar None: Solving One-Step Addition Equations pp. M3-107–M3-118
					3: Play It in Reverse: Solving One-Step Multiplication Equations pp. M3-119–M3-134
					4: Getting Real: Solving Equations to Solve Problems pp. M3-135–M3-144
		MATHia Software	3: Determining Unknown Quantities	4: Reasoning with Expressions and Equations	4: Patterns and One-Step Expressions
				7: Problem Solving with One-Step Equations	1: Patterns and One-Step Equations
			2: Problem Solving with Multiple Representations in the First Quadrant		
				3: Problem Solving with Decimals	
NC.6.EE.7	Solve real-world and mathematical problems by writing and solving equations of the form: <ul style="list-style-type: none"> <li><math>x + p = q</math> in which <math>p</math>, <math>q</math>, and <math>x</math> are all nonnegative rational numbers; and,</li> <li><math>p \square x = q</math> for cases in which <math>p</math>, <math>q</math> and <math>x</math> are all nonnegative rational numbers.</li> </ul>	Textbook	3: Unknown Quantities	2: Equations	2: Bar None: Solving One-Step Addition Equations pp. M3-107–M3-118
					3: Play It in Reverse: Solving One-Step Multiplication Equations pp. M3-119–M3-134
					4: Getting Real: Solving Equations to Solve Problems pp. M3-135–M3-144
		MATHia Software	3: Determining Unknown Quantities	4: Reasoning with Expressions and Equations	1: Using Picture Algebra with Addition, Subtraction and Multiplication
					2: Using Picture Algebra with Multiplication, Total Given
					3: Using Picture Algebra with Addition and Subtraction, Total Given
				5: Solving One-Step Equations	1: Solving One-Step Equations with a Balance
					2: Representing One-Step Equations

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NC.6.EE.7	Solve real-world and mathematical problems by writing and solving equations of the form: <ul style="list-style-type: none"> <li><math>x + p = q</math> in which <math>p</math>, <math>q</math>, and <math>x</math> are all nonnegative rational numbers; and,</li> <li><math>p \pm x = q</math> for cases in which <math>p</math>, <math>q</math> and <math>x</math> are all nonnegative rational numbers.</li> </ul>	MATHia Software	3: Determining Unknown Quantities	5: Solving One-Step Equations	4: Solving with Addition and Subtraction (No Type In)
					5: Solving with Multiplication and Division (No Type In)
					6: Solving One-Step Equations (Type In)
				7: Problem Solving with One-Step Equations	1: Patterns and One-Step Equations
					2: Problem Solving with Multiple Representations in the First Quadrant
					3: Problem Solving with Decimals
NC.6.EE.8	Reason about inequalities by: <ul style="list-style-type: none"> <li>Using substitution to determine whether a given number in a specified set makes an inequality true.</li> <li>Writing an inequality of the form <math>x &gt; c</math> or <math>x &lt; c</math> to represent a constraint or condition in a real-world or mathematical problem.</li> <li>Recognizing that inequalities of the form <math>x &gt; c</math> or <math>x &lt; c</math> have infinitely many solutions.</li> <li>Representing solutions of inequalities on number line diagrams.</li> </ul>	Textbook	3: Unknown Quantities	2: Equations	1: First Among Equals: Reasoning with Equal Expressions pp. M3-87–M3-106
		MATHia Software	3: Determining Unknown Quantities	6: Solving One-Step Inequalities	1: Graphing Inequalities with Positive Rational Numbers
			4: Beyond Positive Quantities	1: Integers	4: Graphing Inequalities with Rational Numbers
NC.6.EE.9	Represent and analyze quantitative relationships by: <ul style="list-style-type: none"> <li>Using variables to represent two quantities in a real-world or mathematical context that change in relationship to one another.</li> <li>Analyze the relationship between quantities in different representations (context, equations, tables, and graphs).</li> </ul>	Textbook	3: Unknown Quantities	2: Equations	4: Getting Real: Solving Equations to Solve Problems pp. M3-135–M3-144
				3: Graphing Quantitative Relationships	1: Every Graph Tells a Story: Independent and Dependent Variables pp. M3-155–M3-182
					2: The Power of the Horizontal Line: Using Graphs to Solve One-Step Equations pp. M3-183–M3-193
					3: Planes, Trains, and Paychecks: Multiple Representations of Equations pp. M3-194–M3-206
	4: Triathlon Training: Relating Distance, Rate, and Time pp. M3-207–M3-220				

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NC.6.EE.9	Represent and analyze quantitative relationships by: <ul style="list-style-type: none"> <li>Using variables to represent two quantities in a real-world or mathematical context that change in relationship to one another.</li> <li>Analyze the relationship between quantities in different representations (context, equations, tables, and graphs).</li> </ul>	Textbook	4: Moving Beyond Positive Quantities	2: The Four Quadrants	3: There Are Many Paths . . . : Problem Solving on the Coordinate Plane pp. M4-87–M4-111
		MATHia Software	3: Determining Unknown Quantities	4: Reasoning with Expressions and Equations	4: Patterns and One-Step Expressions
			4: Moving Beyond Positive Quantities	3: Multiple Representations	1: Solving One-Step Equations Using Multiple Representations in Four Quadrants
NC.6.G.1	Create geometric models to solve real-world and mathematical problems to: <ul style="list-style-type: none"> <li>Find the area of triangles by composing into rectangles and decomposing into right triangles.</li> <li>Find the area of special quadrilaterals and polygons by decomposing into triangles or rectangles.</li> </ul>	Textbook	1: Composing and Decomposing	1: Factors and Area	2: All About That Base...and Height: Area of Triangles and Quadrilaterals pp. M1-15–M1-28 3: Slicing and Dicing: Composite Figures pp. M1-29–M1-38
		MATHia Software	1: Composing and Decomposing	2: Area	1: Developing Area Formulas
					2: Calculating Area of Various Figures
					3: Solving Area Problems 4: Calculating Area of Composite Figures
NC.6.G.2	Apply and extend previous understandings of the volume of a right rectangular prism to find the volume of right rectangular prisms with fractional edge lengths. Apply this understanding to the context of solving real-world and mathematical problems.	Textbook	1: Composing and Decomposing	3: Decimals and Volume	1: Length, Width, and Depth: Deepening Understanding of Volume pp. M1-115–M1-130 2: Which Warehouse?: Volume Composition and Decomposition pp. M1-131–M1-142
		MATHia Software	1: Composing and Decomposing	5: Volume and Surface Area	1: Calculating Volume of Right Prisms 2: Calculating Surface Area of Right Prisms
NC.6.G.3	Use the coordinate plane to solve real-world and mathematical problems by: <ul style="list-style-type: none"> <li>Drawing polygons in the coordinate plane given coordinates for the vertices.</li> <li>Using coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate.</li> </ul>	Textbook	4: Moving Beyond Positive Quantities	2: The Four Quadrants	2: It's a Bird, It's a Plane... It's a Polygon on the Plane!: Graphing Geometric Figures pp. M4-73–M4-86
		MATHia Software	4: Moving Beyond Positive Quantities	2: The Coordinate Plane	4: Drawing Polygons on the Coordinate Plane

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<b>NC.6.G.4</b>	Represent right prisms and right pyramids using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	Textbook	1: Composing and Decomposing	3: Decimals and Volume	3: Breaking the Fourth Wall: Surface Area of Rectangular Prisms and Pyramids pp. M1-143-M1-164
		MATHia Software	1: Composing and Decomposing	5: Volume and Surface Area	3: Calculating Surface Area of Right Prisms
<b>NC.6.SP.1</b>	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.	Textbook	5: Describing Variability of Quantities	1: The Statistical Process	1: What's Your Question?: Understanding the Statistical Process pp. M5-7-M5-24
<b>NC.6.SP.2</b>	Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.	Textbook	5: Describing Variability of Quantities	1: The Statistical Process	2: Get in Shape: Analyzing Numerical Data Displays pp. M5-25-M5-46
					3: Skyscrapers: Using Histograms to Display Data pp. M5-47-M5-60
				2: Numerical Summaries of Data	1: In the Middle: Analyzing Data Using Measures of Center pp. M5-71-M5-86
					2: Box It Up: Displaying the Five-Number Summary pp. M5-87-M5-104
<b>NC.6.SP.3</b>	Understand that both a measure of center and a description of variability should be considered when describing a numerical data set.	Textbook	5: Describing Variability of Quantities	2: Numerical Summaries of Data	3: March MADness: Mean Absolute Deviation pp. M5-105-M5-116
					2: Box It Up: Displaying the Five-Number Summary pp. M5-87-M5-104
<b>NC.6.SP.3a</b>	Determine the measure of center of a data set and understand that it is a single number that summarizes all the values of that data set. o Understand that a mean is a measure of center that represents a balance point or fair share of a data set and can be influenced by the presence of extreme values within the data set. o Understand the median as a measure of center that is the numerical middle of an ordered data set.	Textbook	5: Describing Variability of Quantities	2: Numerical Summaries of Data	1: In the Middle: Analyzing Data Using Measures of Center pp. M5-71-M5-86
					2: Box It Up: Displaying the Five-Number Summary pp. M5-87-M5-104
		MATHia Software	5: Describing Variability of Quantities	1: Measures of Central Tendency	3: March MADness: Mean Absolute Deviation pp. M5-105-M5-116

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)
<b>NC.6.SP.3b</b>	Understand that describing the variability of a data set is needed to distinguish between data sets in the same scale, by comparing graphical representations of different data sets in the same scale that have similar measures of center, but different spreads.	Textbook	5: Describing Variability of Quantities	2: Numerical Summaries of Data	2: Box It Up: Displaying the Five-Number Summary pp. M5-87–M5-104 3: March MADness: Mean Absolute Deviation pp. M5-105–M5-116
		MATHia Software	5: Describing Variability of Quantities	3: Mean Absolute Deviation	1: Calculating Mean Absolute Deviation 2: Using Mean Absolute Deviation
<b>NC.6.SP.4</b>	Display numerical data in plots on a number line. • Use dot plots, histograms, and box plots to represent data. • Compare the attributes of different representations of the same data.	Textbook	5: Describing Variability of Quantities	1: The Statistical Process	2: Get in Shape: Analyzing Numerical Data Displays pp. M5-25–M5-46 3: Skyscrapers: Using Histograms to Display Data pp. M5-47–M5-60
				2: Numerical Summaries of Data	2: Box It Up: Displaying the Five-Number Summary pp. M5-87–M5-104
		MATHia Software	5: Describing Variability of Quantities	2: Displays of Numerical Data	1: Creating and Interpreting Stem Plots 2: Creating and Interpreting Dot Plots 3: Creating and Interpreting Histograms
				4: Box Plots	1: Constructing Box Plots 2: Interpreting Box Plots
<b>NC.6.SP.5</b>	Summarize numerical data sets in relation to their context.	Textbook	5: Describing Variability of Quantities	1: The Statistical Process	2: Get in Shape: Analyzing Numerical Data Displays pp. M5-25–M5-46 3: Skyscrapers: Using Histograms to Display Data pp. M5-47–M5-60
				2: Numerical Summaries of Data	4: You Chose...Wisely: Choosing Appropriate Measures pp. M5-117–M5-130
		MATHia Software	5: Describing Variability of Quantities	4: Box Plots	1: Constructing Box Plots 2: Interpreting Box Plots

Standard ID	Description	Location	Module	Topic (Textbook)/ Unit (MATHia Software)	Lesson (Textbook) / Workspace (MATHia Software)			
NC.6.SP.5a	Describe the collected data by: o Reporting the number of observations in dot plots and histograms. o Communicating the nature of the attribute under investigation, how it was measured, and the units of measurement.	Textbook	5: Describing Variability of Quantities	1: The Statistical Process	2: Get in Shape: Analyzing Numerical Data Displays pp. M5-25–M5-46 3: Skyscrapers: Using Histograms to Display Data pp. M5-47–M5-60			
				2: Numerical Summaries of Data	4: You Chose...Wisely: Choosing Appropriate Measures pp. M5-117–M5-130			
		MATHia Software	5: Describing Variability of Quantities	2: Displays of Numerical Data	1: Creating and Interpreting Stem Plots			
					2: Creating and Interpreting Dot Plots 3: Creating and Interpreting Histograms			
NC.6.SP.5b	Analyze center and variability by: o Giving quantitative measures of center, describing variability, and any overall pattern, and noting any striking deviations. o Justifying the appropriate choice of measures of center using the shape of the data distribution.	Textbook	5: Describing Variability of Quantities	1: The Statistical Process	2: Get in Shape: Analyzing Numerical Data Displays pp. M5-25–M5-46 3: Skyscrapers: Using Histograms to Display Data pp. M5-47–M5-60			
					2: Numerical Summaries of Data	1: In the Middle: Analyzing Data Using Measures of Center pp. M5-71–M5-86 2: Box It Up: Displaying the Five-Number Summary pp. M5-87–M5-104 3: March MADness: Mean Absolute Deviation pp. M5-105–M5-116 4: You Chose...Wisely: Choosing Appropriate Measures pp. M5-117–M5-130		
				MATHia Software		5: Describing Variability of Quantities	1: Measures of Central Tendency	1: Calculating Mean, Median, Mode, and Range
							3: Mean Absolute Deviation	1: Calculating Mean Absolute Deviation 2: Using Mean Absolute Deviation
		1: Measures of Central Tendency	3: Measuring the Effects of Changing Data Sets					