

Level 6: Focused Mathematics Intervention Lesson Correlations

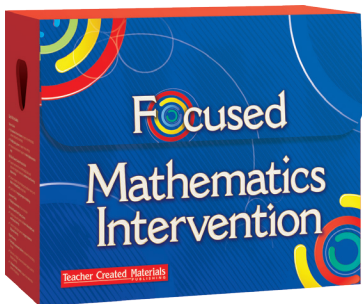
Lesson	Domain	Cluster	Standard	Math Practice
Lesson 1: Writing Ratios	Ratio & Proportional Relationships	Understand ratio concepts and use ratio reasoning to solve problems.	6.RP.A.1 —Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example: The ratio of wings to beaks in the birdhouse at the zoo was 2:1, because for every 2 wings there was 1 beak. For every vote candidate A received, candidate C received nearly three votes.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Attend to precision. • Look for and make use of structure.
Lesson 2: Using Unit Rates	Ratio & Proportional Relationships	Understand ratio concepts and use ratio reasoning to solve problems.	6.RP.A.2 —Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. For example: This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar. We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Model with mathematics. • Attend to precision.
Lesson 3: Using Ratios and Rates	Ratio & Proportional Relationships	Understand ratio concepts and use ratio reasoning to solve problems.	6.RP.A.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.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Model with mathematics. • Attend to precision.
Lesson 4: Exploring Percents	Ratio & Proportional Relationships	Understand ratio concepts and use ratio reasoning to solve problems.	6.RP.A.3.c —Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means $30/100$ times the quantity); solve problems involving finding the whole, given a part and the percent.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Model with mathematics. • Attend to precision.
Lesson 5: Using Percent	Ratio & Proportional Relationships	Understand ratio concepts and use ratio reasoning to solve problems.	6.RP.A.3.c —Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means $30/100$ times the quantity); solve problems involving finding the whole, given a part and the percent.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Model with mathematics. • Attend to precision.
Lesson 6: Division with Fractions	The Number System	Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	6.NS.A.1 —Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions; e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because $3/4$ of $8/9$ is $2/3$. (In general, $(a/b) \div (c/d) = ad/bc$.)	<ul style="list-style-type: none"> • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • Model with mathematics.

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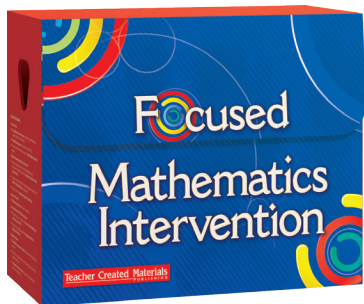
Lesson	Domain	Cluster	Standard	Math Practice
Lesson 7: Finding the Greatest Common Factor	The Number System	Compute fluently with multi-digit numbers and find common factors and multiples.	6.NS.B.4 —Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the Distributive Property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Model with mathematics. • Look for and make use of structure.
Lesson 8: Least Common Multiple	The Number System	Compute fluently with multi-digit numbers and find common factors and multiples.	6.NS.B.4 —Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the Distributive Property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Model with mathematics. • Look for and make use of structure.
Lesson 9: Operations with Decimals	The Number System	Compute fluently with multi-digit numbers and find common factors and multiples.	6.NS.B.3 —Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Use appropriate tools strategically.
Lesson 10: Graphing Rational Numbers	The Number System	Apply and extend previous understandings of numbers to the system of rational numbers.	<p>6.NS.C.5—Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.</p> <p>6.NS.C.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.</p>	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Model with mathematics.
Lesson 11: Order of Rational Numbers	The Number System	Apply and extend previous understandings of numbers to the system of rational numbers.	6.NS.C.7.b —Write, interpret, and explain statements of order for rational numbers in real-world contexts.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • Attend to precision.

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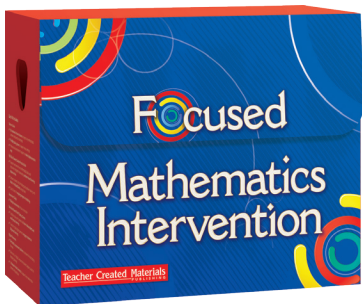
Lesson	Domain	Cluster	Standard	Math Practice
Lesson 12: Absolute Value and Distance in the Plane	The Number System	Apply and extend previous understandings of numbers to the system of rational numbers.	<p>6.NS.C.7.c—Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.</p> <p>6.NS.C.8—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.</p>	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively.
Lesson 13: Evaluating Expressions with Exponents	Expressions & Equations	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.A.1 —Write and evaluate numerical expressions involving whole-number exponents.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Model with mathematics. • Attend to precision.
Lesson 14: Reading and Writing Expressions	Expressions & Equations	Apply and extend previous understandings of arithmetic to algebraic expressions.	<p>6.EE.A.2.a—Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation “Subtract y from 5” as $5 - y$.</p> <p>6.EE.A.2.b—Identify parts of an expression using mathematical terms (<i>sum</i>, <i>term</i>, <i>product</i>, <i>factor</i>, <i>quotient</i>, <i>coefficient</i>); view one or more parts of an expression as a single entity. For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity and a sum of two terms.</p>	<ul style="list-style-type: none"> • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • Attend to precision.
Lesson 15: Evaluating Expressions	Expressions & Equations	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.A.2.c —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). For example, use the formulas $V = s^3$ and $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = \frac{1}{2}$.	<ul style="list-style-type: none"> • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • Model with mathematics.
Lesson 16: Equivalent Expressions	Expressions & Equations	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.A.3 —Apply the properties of operations to generate equivalent expressions. For example, apply the Distributive Property to the expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$; apply the Distributive Property to the expression $24x + 18y$ to produce the equivalent expression $6(4x + 3y)$; apply properties of operations to $y + y + y$ to produce the equivalent expression $3y$.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • Attend to precision.

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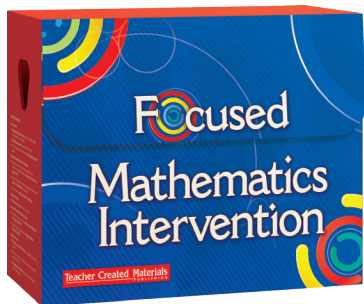
Lesson	Domain	Cluster	Standard	Math Practice
Lesson 17: Simplifying Expressions	Expressions & Equations	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.A.4 —Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions $y + y + y$ and $3y$ are equivalent because they name the same number regardless of which number y stands for.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • Attend to precision.
Lesson 18: Writing Expressions for Real-Life Situations	Expressions & Equations	Reason about and solve one-variable equations and inequalities.	6.EE.B.6 —Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or depending on the purpose at hand, any number in a specified set.	<ul style="list-style-type: none"> • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • Model with mathematics.
Lesson 19: Writing and Solving Addition Equations	Expressions & Equations	Reason about and solve one-variable equations and inequalities.	<p>6.EE.B.5—Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.</p> <p>6.EE.B.7—Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.</p>	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Use appropriate tools strategically. • Attend to precision.
Lesson 20: Writing and Solving Multiplication Equations	Expressions & Equations	Apply and extend previous understandings of arithmetic to algebraic expressions.	<p>6.EE.B.5—Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.</p> <p>6.EE.B.7—Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.</p>	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Use appropriate tools strategically. • Attend to precision.
Lesson 21: Solutions to Inequalities	Expressions & Equations	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.B.5 —Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • Model with mathematics.

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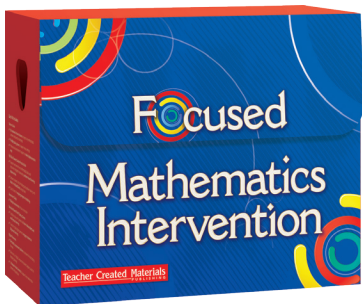
Lesson	Domain	Cluster	Standard	Math Practice
Lesson 22: Graphing Inequalities	Expressions & Equations	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.B.8 —Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.	<ul style="list-style-type: none"> Reason abstractly and quantitatively. Construct viable arguments and critique the reasoning of others. Model with mathematics. Use appropriate tools strategically.
Lesson 23: Independent and Dependent Variables	Expressions & Equations	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.C.9 —Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.	<ul style="list-style-type: none"> Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Model with mathematics. Use appropriate tools strategically. Attend to precision.
Lesson 24: Analyzing Graphs	Expressions & Equations	Apply and extend previous understandings of arithmetic to algebraic expressions.	6.EE.C.9 —Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.	<ul style="list-style-type: none"> 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.
Lesson 25: Area of Right Triangles	Geometry	Solve real-world and mathematical problems involving area, surface area, and volume.	6.G.A.1 —Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	<ul style="list-style-type: none"> Make sense of problems and persevere in solving them. Model with mathematics. Use appropriate tools strategically. Attend to precision.
Lesson 26: Area of Shapes	Geometry	Solve real-world and mathematical problems involving area, surface area, and volume.	6.G.A.1 —Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	<ul style="list-style-type: none"> Make sense of problems and persevere in solving them. Construct viable arguments and critique the reasoning of others. Use appropriate tools strategically. Attend to precision.

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Lesson	Domain	Cluster	Standard	Math Practice
Lesson 27: Unit Volume	Geometry	Solve real-world and mathematical problems involving area, surface area, and volume.	6.G.A.2 —Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Construct viable arguments and critique the reasoning of others. • Use appropriate tools strategically.
Lesson 28: Surface Area	Geometry	Solve real-world and mathematical problems involving area, surface area, and volume.	6.G.A.4 —Represent three-dimensional figures 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.	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Construct viable arguments and critique the reasoning of others. • Use appropriate tools strategically. • Attend to precision.
Lesson 29: Mean, Median, Range	Statistics & Probability	Develop understanding of statistical variability.	6.SP.A.3 —Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	<ul style="list-style-type: none"> • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • Model with mathematics. • Use appropriate tools strategically. • Attend to precision.
Lesson 30: Interpret Data with Box Plots	Statistics & Probability	Summarize and describe distributions.	<p>6.SP.B.4—Display numerical data in plots on a number line, including dot plots, histograms, and box plots.</p> <p>6.SP.B.5.c—Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.</p>	<ul style="list-style-type: none"> • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others.

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