

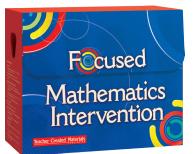


Lesson	Domain	Cluster	Standard	Math Practice
Lesson 1: Addition Strategies	Number & Operations in Base Ten	Use place value understanding and properties of operations to perform multi-digit arithmetic.	3.NBT.A.2 —Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	 Reason abstractly and quantitatively. Look for and make use of structure. Look for and express regularity in repeated reasoning.
Lesson 2: Addition Patterns	Operations & Algebraic Thinking	Solve problems involving the four operations, and identify and explain patterns in arithmetic.	3.OA.D.9 —Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.	 Reason abstractly and quantitatively. Construct viable arguments and critique the reasoning of others. Look for and make use of structure.
Lesson 3: Subtraction Strategies	Number & Operations in Base Ten	Use place value understanding and properties of operations to perform multi-digit arithmetic.	3.NBT.A.2 —Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	 Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Look for and make use of structure. Look for and express regularity in repeated reasoning.
Lesson 4: Elapsed Time	Measurement & Data	Solve problems involving measurement and estimation.	3.MD.A.1 —Solve word problems involving addition and subtraction of time intervals in minutes; e.g., by representing the problem on a number line diagram.	 Make sense of problems and persevere in solving them. Model with mathematics. Use appropriate tools strategically. Attend to precision.
Lesson 5: Multiplication Models	Operations & Algebraic Thinking	Represent and solve problems involving multiplication and division.	3.OA.A.1 —Interpret products of whole numbers; e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each.	 Make sense of problems and persevere in solving them. Model with mathematics. Look for and make use of structure. Look for and express regularity in repeated reasoning.
Lesson 6: Partitive Division	Operations & Algebraic Thinking	Represent and solve problems involving multiplication and division.	3.OA.A.2 —Interpret whole-number quotients of whole numbers; e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each.	 Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Model with mathematics. Look for and make use of structure.
Lesson 7: Measurement Division	Operations & Algebraic Thinking	Represent and solve problems involving multiplication and division.	3.OA.A.2 —Interpret whole-number quotients of whole numbers; e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each.	 Reason abstractly and quantitatively.

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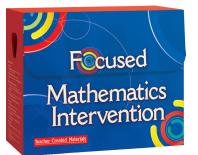
Lesson	Domain	Cluster	Standard	Math Practice
Lesson 8: Problem Solving with Multiplication	Operations & Algebraic Thinking	Represent and solve problems involving multiplication and division.	3.OA.A.3 —Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities; e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	 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.
Lesson 9: Multiplication Patterns	Operations & Algebraic Thinking	Solve problems involving the four operations, and identify and explain patterns in arithmetic.	3.OA.D.9 —Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.	 Reason abstractly and quantitatively. Construct viable arguments and critique the reasoning of others. Model with mathematics. Look for and make use of structure.
Lesson 10: Problem Solving with Division	Operations & Algebraic Thinking	Represent and solve problems involving multiplication and division.	3.OA.A.3 —Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities; e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	 Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Model with mathematics.
Lesson 11: Using Inverse Relationships	Operations & Algebraic Thinking	Represent and solve problems involving multiplication and division.	3.OA.A.4 —Determine the unknown whole number in a multiplication or division equation relating three whole numbers.	 Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Attend to precision. Look for and make use of structure.
Lesson 12: Multiplying with the Associative Property	Operations & Algebraic Thinking	Understand properties of multiplication and the relationship between multiplication and division.	3.OA.B.5 —Apply properties of operations as strategies to multiply and divide.	 Reason abstractly and quantitatively. Model with mathematics. Look for and make use of structure. Look for and express regularity in repeated reasoning.
Lesson 13: Two-Step Word Problems	Operations & Algebraic Thinking	Solve problems involving the four operations, and identify and explain patterns in arithmetic.	3.OA.D.8 —Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	 Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Model with mathematics. Use appropriate tools strategically.
Lesson 14: Square Units	Measurement & Data	Geometric measurement: Understand concepts of area and relate area to multiplication and to addition.	 3.MD.C.5.a—A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area. 3.MD.C.5.b—A plane figure which can be covered without gaps or overlaps by <i>n</i> unit squares is said to have an area of <i>n</i> square units. 	 Reason abstractly and quantitatively. Model with mathematics. Use appropriate tools strategically. Attend to precision.

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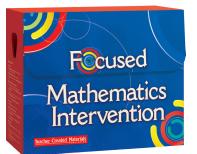
Lesson	Domain	Cluster	Standard	Math Practice
Lesson 15: Measuring with Square Units	Measurement & Data	Geometric measurement: Understand concepts of area and relate area to multiplication and to addition.	3.MD.C.6 —Measure areas by counting unit squares (square cm, square m, square in., square ft., and improvised units).	 Reason abstractly and quantitatively. Model with mathematics. Use appropriate tools strategically. Attend to precision.
Lesson 16: Finding the Area Formula	Measurement & Data	Geometric measurement: Understand concepts of area and relate area to multiplication and to addition.	3.MD.C.7.a —Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.	 Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Model with mathematics. Use appropriate tools strategically. Attend to precision.
Lesson 17: Problem Solving with Area	Measurement & Data	Geometric measurement: Understand concepts of area and relate area to multiplication and to addition.	3.MD.C.7.b —Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	 Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Model with mathematics.
Lesson 18: Area of Rectilinear Figures	Measurement & Data	Geometric measurement: Understand concepts of area and relate area to multiplication and to addition.	3.MD.C.7.d —Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real-world problems.	 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.
Lesson 19: Recognizing Perimeter	Measurement & Data	Geometric measurement: Recognize perimeter.	3.MD.D.8 —Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	 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.
Lesson 20: Unit Fractions	Number & Operations— Fractions	Develop understanding of fractions as numbers.	3.NF.A.1 —Understand a fraction 1/ <i>b</i> as the quantity formed by 1 part when a whole is partitioned into <i>b</i> equal parts; understand a fraction <i>a</i> / <i>b</i> as the quantity formed by <i>a</i> parts of size 1/ <i>b</i> .	 Make sense of problems and persevere in solving them. Model with mathematics. Attend to precision. Look for and make use of structure.
Lesson 21: Building Fractions from Unit Fractions	Number & Operations— Fractions	Develop understanding of fractions as numbers.	3.NF.A.1 —Understand a fraction 1/ <i>b</i> as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction <i>a</i> / <i>b</i> as the quantity formed by <i>a</i> parts of size 1/ <i>b</i> .	 Make sense of problems and persevere in solving them. Model with mathematics. Attend to precision. Look for and make use of structure.

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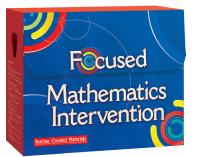
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Lesson 22: Plotting Fractions on Number Lines	Number & Operations— Fractions	Develop understanding of fractions as numbers.	 3.NF.A.2.a—Represent a fraction 1/b on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line. 3.NF.A.2.b—Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. 	 Construct viable arguments and critique the reasoning of others. Use appropriate tools strategically. Model with mathematics. Attend to precision. Look for and make use of structure.
Lesson 23: Equivalent Fractions	Number & Operations— Fractions	Develop understanding of fractions as numbers.	 3.NF.A.3.a—Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. 3.NF.A.3.b—Recognize and generate simple equivalent fractions; e.g., 1/2 = 2/4, 4/6 = 2/3. Explain why the fractions are equivalent; e.g., by using a visual fraction model. 	 Reason abstractly and quantitatively. Model with mathematics. Attend to precision. Look for and make use of structure. Look for and express regularity in repeated reasoning.
Lesson 24: Fractions Equal to One	Number & Operations— Fractions	Develop understanding of fractions as numbers.	3.NF.A.3.c —Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.	 Reason abstractly and quantitatively. Model with mathematics. Attend to precision. Look for and make use of structure.
Lesson 25: Comparing Fractions 1	Number & Operations— Fractions	Develop understanding of fractions as numbers.	3.NF.A.3.d —Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions; e.g., by using a visual fraction model.	 Reason abstractly and quantitatively. Model with mathematics. Attend to precision.
Lesson 26: Comparing Fractions 2	Number & Operations— Fractions	Develop understanding of fractions as numbers.	3.NF.A.3.d —Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions; e.g., by using a visual fraction model.	 Reason abstractly and quantitatively. Model with mathematics. Attend to precision.
Lesson 27: Scaled Graphs	Measurement & Data	Represent and interpret data.	3.MD.B.3 —Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.	 Make sense of problems and persevere in solving them. Model with mathematics. Attend to precision. Look for and make use of structure.

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Lesson	Domain	Cluster	Standard	Math Practice
Lesson 28: Volume and Mass	Measurement & Data	Solve problems involving measurement and estimation.	3.MD.A.2 —Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units; e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	Model with mathematics.Use appropriate tools strategically.Attend to precision.
Lesson 29: Line Plots	Measurement & Data	Represent and interpret data.	3.MD.B.4 —Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.	 Make sense of problems and persevere in solving them. Model with mathematics. Use appropriate tools strategically. Attend to precision.
Lesson 30: Quadrilaterals	Geometry	Reason with shapes and their attributes.	3.G.A.1 —Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	 Construct viable arguments and critique the reasoning of others. Look for and make use of structure. Look for and express regularity in repeated reasoning.

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