Third Grade Mathematics Scope and Sequence

Quarter 1			
Domain	**Operations & Algebraic Thinking**	**Numbers & Operation in Base Ten**	**Measurement & Data**
Standard	3.OA.1 Interpret products of whole numbers, e.g., interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each. (Note: These standards are written with the convention that a x b means a groups of b objects each; however, because of the commutative property, students may also interpret 5 x 7 as the total number of objects in 7 groups of 5 objects each). 3.OA.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. See Table 2, page 96. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.) 3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 × □ = 48; 5 = □÷ 3; 6 × 6 = □. 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division, e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8, or properties of operations. Limit to division without remainders. By the end of Grade 3, know from memory all products of two one-digit numbers. 3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter or a symbol, which stands for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. This standard is limited to problems posed with whole numbers and having whole-number answers. Students may use parentheses for clarification since algebraic order of operations is not expected. 3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.	3.NBT.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.	3.MD.1 Work with time and money. a. Tell and write time to the nearest minute. Measure time intervals in minutes (within 90 minutes). 3.MD.3 Create scaled picture graphs to represent a data set with several categories. Create scaled bar graphs to represent a data set with several categories. Solve two-step "how many more" and "how many less" problems using information presented in the scaled graphs. For example, create a bar graph in which each square in the bar graph might represent 5 pets, then determine how many more/less in two given categories.
Resource	Ready - Unit 1 & 3; Bridges – Unit 1 and 2	Ready – Unit 2; Bridges – Unit 1	Ready – Unit 5; Bridges – Unit 1

WHCSD Scope and Sequence Third Grade Mathematics 2021-2022

Quarter 2					
Domain	**Operations & Algebraic Thinking**	**Numbers & Operations In Base Ten**	**Numbers & Operations – Fractions**	**Measurement & Data**	**Geometry**
Standard	3.OA.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. See Table 2, page 96. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.) 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division, e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8, or properties of operations. Limit to division without remainders. By the end of Grade 3, know from memory all products of two one-digit numbers. 3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter or a symbol, which stands for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. This standard is limited to problems posed with whole numbers and having whole-number answers. Students may use parentheses for clarification	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100. 3.NBT.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.	3.NF.1 Understand a fraction 1 /b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a /b as the quantity formed by a parts of size 1 /b. 3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram. 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. b. Represent a fraction a /b (which may be greater than 1) 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. 3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. a. Understand two fractions as equivalent (equal) if they are the same size or the same point on a number line. b. Recognize and generate simple equivalent fractions, e.g., 1 /2 = 2 /4, 4	3.MD.1 Work with time and money. a. Tell and write time to the nearest minute. Measure time intervals in minutes (within 90 minutes). Solve real-world problems involving addition and subtraction of time intervals (elapsed time) in minutes, e.g., by representing the problem on a number line diagram or clock. b. Solve word problems by adding and subtracting within 1,000, dollars with dollars and cents with cents (not using dollars and cents simultaneously) using the $ and ¢ symbol appropriately (not including decimal notation). 3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms, and liters. Add, subtract, multiply, or divide whole numbers 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. Excludes multiplicative	3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.

	since algebraic order of operations is not expected. 3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.		/6 = 2 /3. Explain why the fractions are equivalent, e.g., by using a visual fraction model. c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3 = 3 /1; recognize that 6 /1 = 6; locate 4 /4 and 1 at the same point of a number line diagram. 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 visual fraction models.	comparison problems involving notions of "times as much"	
Resource	Ready – Unit 1 & 3; Bridges – Unit 3 & 4	Ready – Unit 2; Bridges – Unit 2	Ready – Unit 4	Ready – Unit 5; Bridges – Unit 4	Ready – Unit 6

WHCSD Scope and Sequence **Third Grade** **Mathematics** **2021-2022**

Quarter 3				
Domain	**Operations & Algebraic Thinking**	**Numbers & Operations – Fractions**	**Measurement & Data**	**Geometry**
Standard	3.OA.1 Interpret products of whole numbers, e.g., interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each. (Note: These standards are written with the convention that a x b means a groups of b objects each; however, because of the commutative property, students may also interpret 5 x 7 as the total number of objects in 7 groups of 5 objects each). 3.OA.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. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8. 3.OA.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. See Table 2, page 96. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.) 3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 × □ = 48; 5 = □÷ 3; 6 × 6 = □. 3.OA.5 Apply properties of operations as strategies to multiply and divide. For example, if 6 × 4 = 24 is	3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram. 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. b. Represent a fraction a /b (which may be greater than 1) 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. 3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. a. Understand two fractions as equivalent (equal) if they are the same size or the same point on a number line. 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.	3.MD.1 Work with time and money. a. Tell and write time to the nearest minute. Measure time intervals in minutes (within 90 minutes). Solve real-world problems involving addition and subtraction of time intervals (elapsed time) in minutes, e.g., by representing the problem on a number line diagram or clock. b. Solve word problems by adding and subtracting within 1,000, dollars with dollars and cents with cents (not using dollars and cents simultaneously) using the $ and ¢ symbol appropriately (not including decimal notation). 3.MD.3 Create scaled picture graphs to represent a data set with several categories. Create scaled bar graphs to represent a data set with several categories. Solve two-step "how many more" and "how many less" problems using information presented in the scaled graphs. For example, create a bar graph in which each square in the bar graph might represent 5 pets, then determine how many more/less in two given categories. 3.MD.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units). 3.MD.5 Recognize area as an attribute of plane figures and understand concepts of area measurement. 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. b. A	3.G.1 Draw and describe triangles, quadrilaterals (rhombuses, rectangles, and squares), and polygons (up to 8 sides) based on the number of sides and the presence or absence of square corners (right angles).

	known, then 4 × 6 = 24 is also known (Commutative Property of Multiplication); 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30 (Associative Property of Multiplication); knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56 (Distributive Property). Students need not use formal terms for these properties. 3.OA.6 Understand division as an unknown-factor problem. For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8. 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division, e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8, or properties of operations. Limit to division without remainders. By the end of Grade 3, know from memory all products of two one-digit numbers. 3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter or a symbol, which stands for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. This standard is limited to problems posed with whole numbers and having whole-number answers. Students may use parentheses for clarification since algebraic order of operations is not expected.	c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3 = 3 /1; recognize that 6 /1 = 6; locate 4 /4 and 1 at the same point of a number line diagram. 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 visual fraction models.	plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units. 3.MD.7 Relate area to the operations of multiplication and addition. 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. 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. c. Use tiling to show in a concrete case that the area of a rectangle with whole number side lengths a and b + c is the sum of a × b and a × c (represent the distributive property with visual models including an area model). d. Recognize area as additive. Find the area of figures composed of rectangles by decomposing into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real-world problems. 3.MD.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.	
Resource	Ready – Unit 1 & 3; Bridges – Unit 5 & 6	Ready – Unit 4; Bridges – Unit 5 & 6	Ready – Unit 5; Bridges – Unit 5 & 6	Ready – Unit 6; Bridges – Unit 6

WHCSD Scope and Sequence Third Grade Mathematics 2021-2022

Quarter 4					
Domain	**Operations & Algebraic Thinking**	**Numbers & Operations In Base Ten**	**Numbers & Operations – Fractions**	**Measurement & Data**	**Geometry**
Standard	3.OA.1 Interpret products of whole numbers, e.g., interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each. (Note: These standards are written with the convention that a x b means a groups of b objects each; however, because of the commutative property, students may also interpret 5 x 7 as the total number of objects in 7 groups of 5 objects each). 3.OA.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. For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8. 3.OA.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. See Table 2, page 96. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)	3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90, e.g., 9 × 80, 5 × 60 using strategies based on place value and properties of operations.	3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram. 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. b. Represent a fraction a /b (which may be greater than 1) 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. 3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. a. Understand two fractions as equivalent (equal) if they are the same size or the same point on a number line. 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. c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3 = 3	3.MD.1 Work with time and money. a. Tell and write time to the nearest minute. Measure time intervals in minutes (within 90 minutes). Solve real-world problems involving addition and subtraction of time intervals (elapsed time) in minutes, e.g., by representing the problem on a number line diagram or clock. b. Solve word problems by adding and subtracting within 1,000, dollars with dollars and cents with cents (not using dollars and cents simultaneously) using the $ and ¢ symbol appropriately (not including decimal notation). 3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by creating a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. 3.MD.7 Relate area to the operations of multiplication and addition.	3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.

	3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 × □ = 48; 5 = □÷ 3; 6 × 6 = □. 3.OA.5 Apply properties of operations as strategies to multiply and divide. For example, if 6 × 4 = 24 is known, then 4 × 6 = 24 is also known (Commutative Property of Multiplication); 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30 (Associative Property of Multiplication); knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56 (Distributive Property). Students need not use formal terms for these properties. 3.OA.6 Understand division as an unknown-factor problem. For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8. 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division, e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8, or properties of operations. Limit to division without remainders. By the end of Grade 3, know from memory all products of two one-digit numbers. 3.OA.8 Solve two-step word problems using the four operations. Represent		/1; recognize that 6 /1 = 6; locate 4 /4 and 1 at the same point of a number line diagram. 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 visual fraction models.	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. 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. c. Use tiling to show in a concrete case that the area of a rectangle with whole number side lengths a and b + c is the sum of a × b and a × c (represent the distributive property with visual models including an area model). d. Recognize area as additive. Find the area of figures composed of rectangles by decomposing into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real-world problems. 3.MD.8 Solve real -world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown	

	these problems using equations with a letter or a symbol, which stands for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. This standard is limited to problems posed with whole numbers and having whole-number answers. Students may use parentheses for clarification since algebraic order of operations is not expected. 3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.			side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	
Resource	Ready – Unit 1 & 3; Bridges – Unit 7	Ready – Unit 2; Bridges – Unit 7	Ready – Unit 4; Bridges – Unit 7	Ready – Unit 5	Ready – Unit 6

Quarter 1 Learning Targets

Ohio Standard	Learning Targets	Notes
3.OA.1	Interpret products of whole number.	
	Interpret the "x" symbol as meaning equal groups of objects (multiplication). [1]	Write equations to represent arrays, explain using terms such as "groups of "
	Explore the commutative aspect of multiplication by building arrays and area models. [1]	
3.OA.3	(Introductory) Use multiplication within 100 to solve word problems in situations involving equal groups and arrays by using drawings and equations with a symbol for the unknown number to represent the problem.	See Table 2 in the Appendix for word problem examples, Mastery expected in Quarter 2
3.OA.4	Determine the unknown whole-number in a multiplication equation relating three whole numbers.	See example in standard. Spirals back in Quarter 3 when division is added.
3.OA.5	Apply properties of operations as strategies to multiply.	See standard for example and Appendix, Table 3
	Develop the conceptual understanding that multiplying a factor by 0 results in zero. [1]	
3.OA.5 & 7	Explain and apply flexibility with the different strategies or properties of multiplication. [1]	See Appendix, Table 3 for explanation
3.OA.7	(Introductory) Use strategies to solve to multiply within 100.	Fluency is expected in Quarter 3; spirals in Quarter 2 & 3; division added in quarter 3; see standard for examples
3.OA.8	(Introductory) Solve two-step word problems using addition, subtraction and/or multiplication.	Mastery expected in Quarter 2; division gets added in Quarter 3
	(Introductory) Represent two-step word problems using equations with a letter or a symbol, which stands for the unknown quantity.	
	Assess the reasonableness of answers using mental computation and estimation strategies.	
3.OA.9	Identify arithmetic patterns among basic addition and subtraction facts.	See standard for examples
	Explain identified arithmetic patterns using properties of operations.	
3.NBT.2	Fluently add 2-and 3-digit numbers using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	Builds on in Quarter 2 with adding and subtracting 4-digit numbers; review place value concepts (ones place, tens place, 10 ones = 1 ten, etc.)
	Generalize computation strategies of addition that will apply to larger numbers. [1]	
	Fluently subtract 2-and 3-digit numbers using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	
	Generalize computation strategies of subtraction that will apply to larger numbers. [1]	

3.NBT.2		
3.MD.1	(Review from 1st & 2nd Grade) Identify time to the hour, half hour and 5 minute interval.	Review skill to help prepare scholars to tell time to the minute in Quarter 2.
3.MD.3	Create scaled picture graphs to represent data set with several categories.	
	Solve two-step "how many more" and "how many less" problems using information presented in scaled picture graphs.	
	Create scaled bar graphs to represent a data set with several categories.	
	Solve two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.	

[1] Instructional Focus recommended by the ODE's Mathematics Model Curriculum; Learning Target needed for complete standard mastery

Quarter 2 Learning Targets

Ohio Standard	Learning Targets	Notes
3.OA.3	Use multiplication within 100 to solve word problems in situations involving equal groups and arrays by using drawings and equations with a symbol for the unknown number to represent the problem.	Mastery is expected in this quarter, but it will continue to spiral Quarter 3 & 4 adding in division.
3.OA.7	Use strategies to solve to multiply within 100.	Fluency is expected in Quarter 3; division added in quarter 3, see standard for examples
3.OA.8	Solve two-step word problems using addition, subtraction and/or multiplication.	
	Represent two-step word problems using equations with a letter or a symbol, which stands for the unknown quantity.	
	Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	Rounding added as a strategy (not in Quarter 1)
3.OA.9	Identify arithmetic patterns among basic multiplication facts.	
	Explain identified arithmetic patterns using properties of operations.	See standard for an example
3.NBT.1	Use place value understanding to round numbers to the nearest 10 up to 3-digits.	
	Use place value understanding to round numbers to the nearest 100 up to 3-digits.	
	Explore rounding by using the location of a given number on a model (e.g. a number line, number chart, etc.). [1]	
	Explore the purposes of rounding. [1]	
	Identify all numbers that will round to a chosen number. [1]	See model curriculum for example pg. 21
3.NBT.2	Fluently add within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	
	Generalize computation strategies of addition that will apply to larger numbers. [1]	
	Fluently subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	
	Generalize computation strategies of subtraction that will apply to larger numbers. [1]	
3.NF.2	Identify if a whole is divided into equal parts. [1]	
	Represent fractions on a number line between 0 and 1.	The model curriculum gives clarity on learning expectations pg. 25; builds on with fractions greater than 1 in Quarter 3

	Represent a fraction on a number line diagram by defining the interval between 0 and 1 as the whole and partitioning it into equal parts.	
2.NF.3	Understand two fractions as equivalent if they are the same size or the same point on a number line.	
	(Introductory) Recognize simple equivalent fractions.	See standard for examples; mastery expected in Quarter 3
	(Introductory) Generate simple equivalent fractions.	
	(Introductory) Explain why fractions are equivalent.	A visual fraction model could be used; Mastery expected in Quarter 3
3.MD.1	Tells time to the nearest minute.	Elapsed time comes in Quarter 3
	Writes time to the nearest minute.	
3.MD.2	Measure liquid volumes using standard units of liters.	
	Estimate liquid volumes using standard units of liters.	
	Solve one-step word problems involving whole-number volumes that are given in the same unit.	Add, subtract, multiply and divide as needed by given problem
	Measure masses of objects using standard units of grams and kilograms.	
	Estimate masses of objects using standard units of grams and kilograms.	
	Solve one-step word problems involving whole-number masses that are given in the same unit.	Add, subtract, multiply and divide as needed by given problem
3.MD.3	Create scaled line plot to represent data set with several categories.	Length measurements can be generated & used to create line plot, scale of line plot can be whole numbers, halves or quarters[1]
	Solve two-step "how many more" and "how many less" problems using information presented in scaled line plot.	
3.G.2	Partition shapes into equal areas.	
	Express the area of each part as a unit fraction of the whole.	Ex. shape divided into 4 parts ; area of each part = ¼; teach with NF standards

[1] Instructional Focus recommended by the ODE's Mathematics Model Curriculum; Learning Target needed for complete standard mastery

Quarter 3 Learning Targets

Ohio Standard	Learning Targets	Notes
3.OA.2	Interpret whole-number quotients of whole-numbers.	See standard for examples
	Interpret the "÷" symbols as meaning partitioning the total into equal groups or an equal number in each group. [1]	
3.OA.3	Use multiplication within 100 to solve word problems in situations involving equal groups and arrays by using drawings and equations with a symbol for the unknown number to represent the problem.	
	(Introductory) Use division within 100 to solve word problems in situations involving equal groups and arrays by using drawings and equations with a symbol for the unknown number to represent the problem.	Mastery expected in Quarter 4
3.OA.4	Determine the unknown whole-number in a multiplication equation relating three whole numbers.	Mastery expected in Quarter 1; spiral back for review
	Determine the unknown whole-number in a division equation relating three whole numbers.	
3.OA.5	Apply properties of operations as strategies to divide.	See standard for example and Appendix Table 3
	Explain and apply flexibility with the different strategies or properties of multiplication. [1]	
3.OA.6	Understand division as an unknown-factor problem.	See standard for example.
3.OA.7	Fluently multiply within 100.	
	(Introductory) Use strategies to solve division facts within 100.	Mastery expected in Quarter 4
3.OA.8	Solve two-step word problems using the four operations.	Division added, Mastery expected in Quarter 4
	Represent two-step word problems using equations with a letter or a symbol, which stands for the unknown quantity.	
	Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	
3.NF.2	Represent fractions on a number line between 0 and 1 and greater than 1 by marking off lengths.	
3.MD.1	Measure time intervals in minutes (within 90 minutes).	Problems can be represented on a number line, clock, etc.
	Solve real-world problems involving addition and subtraction of time intervals (elapsed time) in minutes.	
	Solve word problems by adding within 1,000, dollars with dollars and cents with cents using the appropriate symbols.	Not to include decimal notation, use dollar and cent symbols appropriately

3.MD.6	Measure area by counting unit squares (square cm, square m, square in., square ft., and improvised units).	
3.MD.7	Find the area of a rectangle with whole-number side lengths by tiling it.	
3.MD.7	Find the area of a rectangle with whole-number side lengths by multiplying side lengths.	
	Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of real-world problems.	
	Use tiling to show in a concrete case that the area of a rectangle with whole number sides lengths a and b + c is the sum of a x b and a x c.	Represent distributive property with visual model including area model
	Recognize area as additive.	
	Find the area of figures composed of rectangles by decomposing into non-overlapping rectangles and adding the areas of the non-overlapping parts.	
	Find the area of figures composed of rectangles by decomposing into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying to solve real-world problems.	
3.MD.8	Solve mathematical problems involving perimeter of polygons when given side lengths.	
	Solve mathematical problems involving perimeter of polygons by finding an unknown side length.	
	Solve mathematical problems involving perimeter of polygons exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	
	Solve real-world word problems involving perimeter.	
3.G.1	Draw triangles, quadrilaterals, (rhombuses, rectangles, and squares) and polygons based on the number of sides and the presence or absence of square corners.	
	Describe triangles, quadrilaterals, (rhombuses, rectangles, and squares) and polygons based on the number of sides and the presence or absence of square corners.	

[1] Instructional Focus recommended by the ODE's Mathematics Model Curriculum; Learning Target needed for complete standard mastery

Quarter 4 Learning Targets

Ohio Standard	Learning Targets	Notes
3.OA.3	Use division within 100 to solve word problems in situations involving equal groups and arrays by using drawings and equations with a symbol for the unknown number to represent the problem.	
3.OA.6	Understand division as an unknown-factor problem.	See standard for example.
3.OA.7	Fluently divide within 100.	
3.OA.8	Solve two-step word problems using the four operations.	
	Represent two-step word problems using equations with a letter or a symbol, which stands for the unknown quantity.	
	Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	
3.NF.2	Represent fractions on a number line between 0 and 1.	
3.MD.7	Find the area of figures composed of rectangles by decomposing into non-overlapping rectangles and adding the areas of the non-overlapping parts.	
	Find the area of figures composed of rectangles by decomposing into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying to solve real-world problems.	
3.MD.8	Solve mathematical problems involving perimeter of polygons when given side lengths.	
	Solve mathematical problems involving perimeter of polygons by finding an unknown side length.	
3.MD.8	Solve mathematical problems involving perimeter of polygons exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	
	Solve real-world word problems involving perimeter.	

[1] Instructional Focus recommended by the ODE's Mathematics Model Curriculum; Learning Target needed for complete standard mastery