3.OA.1-4

3.OA.A.1
Represent the concept of multiplication of whole numbers using models, including but not limited to, equal sized groups (“groups of”), arrays, area models, repeated addition, and “equal jumps” on a number line.
~Assessment-Summative M3:2, Formative Chapter 6, Formative Chapter 7

3.OA.A.2 Represent the concept of division of whole numbers (resulting in whole number quotients) using models including, but not limited to, partitioning, repeated subtraction, sharing, and inverse of multiplication.
~Asssessment-Summative M3:2, Formative Chapter 8

3.OA.A.3 Solve multiplication and division word problems within 100 using appropriate modeling strategies and equations.
~Assessment-Summative M3:2, Formative Chapter 6, Formative Chapter 7

3.OA.A.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is a missing factor, product, dividend, divisor, or quotient. (Students need not know formal terms.)
~Assessment-Summative M3:3, Formative Chapter 8

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught.	Suggested Activities/Assessment (Quarter & Unit):
	Score 3.5, in addition to score 3.0 performance, partial success at score 4.0 content	
Score 3.0	The student will: • Use multiplication and division within 100 to solve word problems (for example, using drawings and equations with a symbol for the unknown number to represent the problem) (3.0A.A.3) • Determine the unknown whole number in a multiplication or division equation relating three whole numbers (for example, 8 x ___ = 45, 5 = ___X 3) (3.0A.A.4) ● Use multiplication and division within 100 to solve problems using arrays, models, number lines, etc.	Formative assessment: Chapter Performance Task: Chapter Test:
	Score 2.5, in addition to score 3.0 performance, partial success at score 3.0 content	
Score 2.0	The student will recognize or recall specific vocabulary, such as: • *Digit, divide, division, equation, interpret, multiplication, multiple, multiply, number, place value, product, property, quotient, relate, represent, strategy, symbol, unknown,*	

	unknown-factor problem, whole number, word problem The student will perform basic processes, such as: • Interpret products of whole numbers (for example, understanding 5 x 7 as the total number of objects in five groups of seven) (3.0A.A.1) • Interpret whole-number quotients of whole numbers (for example, understanding 56 X 8 as the number of objects in each share when 56 objects are divided into equal shares of 8 objects each) (3.0A.A.2) • With support, multiply and divide within 100 ● Know from memory all products of two one-digit numbers (3.0A.C.7) ● Multiply one-digit whole numbers by multiples of 10 in the range of 10 to 90 using strategies based on place value and properties of whole numbers (3.NBT.A.3)	
	Score 1.5, in addition to score 1.0 performance, partial success at score 2.0 content	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
Score 0.0	Even with help, no success	

3.OA.B.5-6

3.OA.B.5 Apply properties of multiplication as strategies to multiply and divide. (Students need not use formal terms for these properties.)
~Assessment- Summative M3:2 and M3:3, Formative Chapter 6, Formative Chapter 7, Formative Chapter 8, Formative Chapter 9

3.OA.B.6 Understand division as an unknown-factor problem.
~Assessment- Summative M3:3, Formative Chapter 8

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught.	Suggested Activities/Assessment (Quarter & Unit): Formative assessment: Chapter Performance

	Score 3.5, in addition to score 3.0 performance, partial success at score 4.0 content	Task: Chapter Test:
Score 3.0	The student will: • Apply properties of operations as strategies to multiply and divide (for example, commutative, associative, distributive') (3.0A.B.5) • Solve division problems as unknown-factor problems (for example, finding 32 / 8 by finding the number that makes 32 when multiplied by 8) (3.0A.B.6)	
	Score 2.5, in addition to score 3.0 performance, partial success at score 3.0 content	
Score 2.0	The student will recognize or recall specific vocabulary, such as: • *Addition, arithmetic, divide, multiplication, multiply, operation, pattern, property, strategy, table, commutative, associative, distributive, factors, quotient, product* The student will perform basic processes, such as: • Recognize or recall the properties of multiplication (for example, commutative, associative, distributive') • Identify arithmetic patterns in the addition and multiplication tables (3.0A.0.9)	
	Score 1.5, in addition to score 1.0 performance, partial success at score 2.0 content	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
Score 0.0	Even with help, no success	

3.OA.7
3.OA.C.7 (state required)

Fluently multiply and divide with factors 1-10 using mental strategies. By end of third grade, know automatically all products of one-digit factors based on strategies.
~Asessment-Summative M3:2 and M3:3, Formative Chapter 7, Formative Chapter 8

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught.	Suggested Activities/Assessment (Quarter & Unit): Formative assessment:

	Score 3.5, in addition to score 3.0 performance, partial success at score 4.0 content	Chapter Performance Task: Chapter Test:
Score 3.0	The student will: • Fluently multiply and divide within 100 (3.0A.C.7) • Solve division and multiplication problems as unknown-factor problems (for example, finding 32 / 8 by finding the number that makes 32 when multiplied by 8; finding 8 X 4 by understanding that 8 goes into 32 4 times)	
	Score 2.5, in addition to score 3.0 performance, partial success at score 3.0 content	
Score 2.0	The student will recognize or recall specific vocabulary, such as: • *Digit, divide, division, equation, interpret, multiplication, multiple, multiply, number, place value, product, property, quotient, relate, represent, strategy, symbol, unknown, unknown-factor problem, whole number, word problem* The student will perform basic processes, such as: • Understand products of whole numbers (for example, understanding 5 x 7 as the total number of objects in five groups of seven) (3.0A.A.1) • Understand whole-number quotients of whole numbers (for example, understanding 56 / 8 as the number of objects in each share when 56 objects are divided into equal shares of 8 objects each) (3.0A.A.2) • With support, fluently multiply and divide within 100 (3.0A.C.7) • Multiply one-digit whole numbers by multiples of 10 in the range of 10 to 90 using strategies based on place value and properties of whole numbers (3.NBT.A.3)	
	Score 1.5, in addition to score 1.0 performance, partial success at score 2.0 content	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
Score 0.0	Even with help, no success	

3.OA.8-9

3.OA.D.8 (state required)

Solve two-step whole number word problems using the four basic operations. Students should apply the Order of Operations when there are no parentheses to specify a particular order.

- Use equations with symbols to represent numbers.
- Check answers using rounding, estimation, and other strategies.

~Assessment-Formative 6, Formative 7, Formative 8, Summative M3:10

3.OA.D.9 Identify arithmetic patterns and explain the relationships using properties of operations.

~Assessment-Summative M3:2

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught.	Suggested Activities/Assessment (Quarter & Unit): Textbook does not present assessments with equations & symbols (i.e. 8Xa=40); PLC must address with own assessment items. MIF Ch. 6 Enrichment Formative assessment: Chapter Performance Task: Chapter Test:
	Score 3.5, in addition to score 3.0 performance, partial success at score 4.0 content	
Score 3.0	The student will: • Solve two-step word problems using the four operations with a letter standing for the unknown quantity (3.0A.D.8) • Assess the reasonableness of answers using mental computation and estimation strategies (3.0A.D.8) • Apply properties of operations as strategies to multiply and divide (for example, commutative, associative, distributive) (3.0A.B.5) • Explain arithmetic patterns (addition or multiplication table) using the properties of operations (3.0A.D.9)	
	Score 2.5, in addition to score 3.0 performance, partial success at score 3.0 content	
Score 2.0	The student will recognize or recall specific vocabulary, such as: • *Computation, equation, estimation, mental, operation, quantity, reasonable, strategy, unknown, word problem, addition, arithmetic, divide, multiplication, multiply, pattern, property, table, commutative, associative, distributive* The student will perform basic processes, such as: • Represent two-step word problems using equations with a letter standing for the unknown quantity (student writes equation like 4 X 8 = a; a + 8 = 40) (3.0A.D.8) • Identify arithmetic patterns in the addition and multiplication	

	tables (3.0A.0.9)	
	Score 1.5, in addition to score 1.0 performance, partial success at score 2.0 content	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
Score 0.0	Even with help, no success	

3.NF.1-3
3.NF.F.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 sized 1/b.
~Assessment-Summative M3:4, Formative 14

3.NF.F.2 Understand and represent fractions on a number line diagram. (state required)
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 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.
~Assessment-Summative M3:4, Formative 14

3.NF.F.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. (state required)
A. Understand two fractions as equivalent if they are the same size, or the same point on a number line.
B. Recognize and generate simple equivalent fractions. Explain why the fractions are equivalent.
C. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.
D. Compare two fractions with the same numerator or the same denominator, by reasoning about their size, Recognize that valid comparisons rely on the two fractions referring to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions.
~Assessment-Summative M3:4, Formative 14

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught.	Suggested Activities/Assessment (Quarter & Unit): Group feeling that 2.0 is too difficult for students?

	Score 3.5, in addition to score 3.0 performance, partial success at score 4.0 content	Reevaluate at a later time. Formative assessment: Chapter Performance Task: Chapter Test:
Score 3.0	The student will: ● Represent fractions 1/b and *a/b* on a number line (3.NF.A.2a; 3.NF.A.2b) • Generate simple equivalent fractions (for example, 1/2 = 2/4; 4/6 = 2/3) and explain why they are equivalent (3.NFA3b) • Express whole numbers as fractions (3.NFA3c) ● Use comparison symbols (<, >, and =) to compare fractions and justify the comparison of two fractions with the same numerator or same denominator (3.NFA3d)	
	Score 2.5, in addition to score 3.0 performance, partial success at score 3.0 content	
Score 2.0	The student will recognize or recall specific vocabulary, such as: • *Divided, equal, fraction, number line, part, quantity, size, whole, compare, comparison, denominator, equivalent, express, generate, justify, model, numerator, simple, visual, whole number* The student will perform basic processes, such as: • Describe zero to one on a number line as one whole • Describe a fraction 1/b as the quantity formed by one part when a whole is divided into *b* equal parts (3.NF.A.1) ● Describe a fraction *a/b* as the quantity formed by *a* parts of size 1/b (3.NF.A.1) • Recognize simple equivalent fractions with a visual model (3.NFA3b) • Recognize fractions that are equivalent to whole numbers (3.NFA3c) ● Compare two fractions with the same numerator or same denominator using visual fraction models (3.NFA3d) ● Reconize and explain meaning of comparison symbols (<, >, and =)	
	Score 1.5, in addition to score 1.0 performance, partial success at score 2.0 content	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
Score 0.0	Even with help, no success	

3.MD.3-4
3.MD.H.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 graphs.
~Assessment-Summative M3:7, Formative 13

3.MD.H.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Use the data to create a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.
~Assessment-(Will have to create one)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught.	Suggested Activities/Assessment (Quarter & Unit): Formative assessment: Chapter Performance Task: Chapter Test:
	Score 3.5, in addition to score 3.0 performance, partial success at score 4.0 content	
Score 3.0	The student will: • Draw a scaled picture graph and a scaled bar graph to represent a data set (3.MD.B.3) • Solve two-step problems using information from scaled bar graphs (3.MD.B.3) • Represent measurement data in halves and fourths of an inch on a line plot (3.MD.B.4)	
	Score 2.5, in addition to score 3.0 performance, partial success at score 3.0 content	
Score 2.0	The student will recognize or recall specific vocabulary, such as: • *Bar graph, data, data set, fourth, generate, half, inch, interpret, length, less, line plot, measure, measurement, more, picture graph, represent, scaled* The student will perform basic processes, such as: • Interpret/explain and answer simple questions about a scaled picture graph and bar graph (i.e. What is being measured?) • Solve one-step problems (for example, "how many more" and	

	"how many less") using information from scaled bar graphs (3.MD.B.3) ● Generate data by measuring lengths to the half and fourth of an inch (3.MD.B.4)	
	Score 1.5, in addition to score 1.0 performance, partial success at score 2.0 content	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
Score 0.0	Even with help, no success	

3.MD.5-7

3.MD.I.5
Understand area as an attribute of plane figures and understand concepts of area measurement, such as square units without gaps or overlaps.
~Assessment-Summative M3:8, Formative 19

3.MD.I.6 Measure areas by counting unit squares (square cm, square m, square in., square ft, and improvised units).
~Assessment-Summative M3:8, Formative 19

3.MD.I.7 Relate area to the operations of multiplication and addition. (state required)
A. Find the area of a rectangle with whole-number side lengths (dimensions) by multiplying them. Show that this area is the same as when counting unit squares.
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 area models to represent the distributive property in mathematical reasoning. 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.
~Assessment-Summative M3:8, Formative 19

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught.	Suggested Activities/Assessment (Quarter & Unit): Formative assessment: Chapter Performance Task: Chapter Test:
	Score 3.5, in addition to score 3.0 performance, partial success at score 4.0 content	
Score 3.0	The student will: • Solve real-world problems involving rectangular and rectilinear area (3.MD.C.7b; 3.MD.C 7d) • Use tiling to demonstrate the distributive property by showing that the area of a rectangle with side lengths *a* and *b* + *c* is the sum of *a X* b and *a X c* (3.MD.C.7c) ● Calculate areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the area (3.MD.C.7d)	
	Score 2.5, in addition to score 3.0 performance, partial success at score 3.0 content	
Score 2.0	The student will recognize or recall specific vocabulary, such as: • *Add, area, calculate, concept, count, decompose, distributive property, figure, length, measure, measurement, multiply, overlap, real world, rectangle, rectangular, rectilinear, side, square unit, sum, tiling* The student will perform basic processes, such as: • Explain concepts of area measurement (3.MD.C.5) • Measure area by counting square units (cm, m, in., ft.) (3.MD.C.6) ● Demonstrate that area can be found by tiling a rectangular area and that it is the same as multiplying the side lengths (3.MD.C.7a)	
	Score 1.5, in addition to score 1.0 performance, partial success at score 2.0 content	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
Score 0.0	Even with help, no success	

3.MD.8
3.MD.J.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 area or with the same area and different perimeter.
~Assessment-Summative M3:8, Formative 19

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. ● Solve for at least two or more unknown side lengths given the perimeter of a polygon or other irregular shape	Suggested Activities/Assessment (Quarter & Unit): Teach to instruct students to find the perimeter of a polygon or other irregular shape with two or more unknown side lengths. WY-TOPP may have questions with more than one unknown side length, asking for perimeter. Formative assessment: Chapter Performance Task: Chapter Test:
	Score 3.5, in addition to score 3.0 performance, partial success at score 4.0 content	
Score 3.0	The student will: • Solve real-world and mathematical problems involving perimeters of polygons (3.MD.0.8) • Compare rectangles with the same area and different perimeters, as well as rectangles with the same perimeters and different areas (3.MD.D.8) ● Solve for an unknown side length given the perimeter of a polygon or other irregular shape	
	Score 2.5, in addition to score 3.0 performance, partial success at score 3.0 content	
Score 2.0	The student will recognize or recall specific vocabulary, such as: • *Area, compare, different, length, mathematical, perimeter, polygon, real world, rectangle, same, side, unknown* The student will perform basic processes, such as: ● Find the perimeter of polygons given the side lengths (3.MD.D.8) ● Solve for an unknown side length given the perimeter of a regular shape, such as a square	
	Score 1.5, in addition to score 1.0 performance, partial success at score 2.0 content	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
Score 0.0	Even with help, no success	

3.G.1-2
3.G.K.1
Use attributes of quadrilaterals to classify rhombuses, rectangles, and squares. Understand 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.
~Assessment-Summative M3:9, Formative 18

3.G.K.2
Partition rectangles, regular polygons, and circles into parts with equal areas. Express the area of each part as a unit fraction of the whole.
~Assessment-Summative M3:9, Formative 18

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. ● ● Express the area of each part of any partitioned shape (beyond rectangles, regular polygons, circles) as a unit fraction of the whole (3.G.A.2)	Suggested Activities/Assessment (Quarter & Unit): Formative assessment: Chapter Performance Task: Chapter Test:
	Score 3.5, in addition to score 3.0 performance, partial success at score 4.0 content	
Score 3.0	The student will: ● Classify quadrilaterals (rhombuses, rectangles, and squares) into categories based on their attributes (3.G.A.1) *The* student will: ● Express the area of each part of a partitioned shape (rectangles, regular polygons, circles) as a unit fraction of the whole (3.G.A.2)	
	Score 2.5, in addition to score 3.0 performance, partial success at score 3.0 content	
Score 2.0	The student will recognize or recall specific vocabulary, such as: • *Attribute, category, classify, quadrilateral, area, equal,*	

	express, part, partition, shape, unit fraction, whole The student will perform basic processes, such as: ● Identify the attributes of various quadrilaterals ● Partition shapes into parts with equal areas (3.G.A.2)	
	Score 1.5, in addition to score 1.0 performance, partial success at score 2.0 content	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
Score 0.0	Even with help, no success	