3rd Grade Mathematics

Curriculum/Content Area: Mathematics	Course Length: School Year
Course Title: 3rd Grade Mathematics	Date last reviewed: February 2nd, 2016 **Previous 3rd Grade UbD**
Prerequisites: NA	Board approval date: TBD
Primary Resource: Bridges in Mathematics	

Desired Results

Course description and purpose: This framework for improving student learning focuses on high-quality math standards. It provides teachers with a clear set of math concepts and skills for students to understand and be able to do by the end of the school year.

Mathematical Practice Standards		
The Standards for Mathematical Practice are central to the teaching and learning of mathematics. These practices describe the behaviors and habits of mind that are exhibited by students who are mathematically proficient. Mathematical understanding is the intersection of these practices and mathematics content. It is critical that the Standards for Mathematical Practice are embedded in daily mathematics instruction.		

Mathematical Practice Standards		Grade Level/Course Explanation
Habits of Mind	MP.1 Make sense of problems and persevere in solving them	Third graders consider the meaning of a problem and look for appropriate, efficient ways to solve it. They use concrete and visual models as well as expressions and equations to represent, understand, and solve problems. They try different approaches when necessary, evaluate whether their solutions make sense in the context of the problem, and use alternative methods to check their answers.
	MP.6 Attend to precision.	Third graders are increasingly able to be clear and precise in communicating mathematically, both in writing and in discussion. They specify units of measure and are careful to use the correct language to describe operations and symbols. They also take care to measure, draw, and label with precision.
Reasoning & Explaining	MP.2 Reason abstractly and quantitatively.	Third graders connect the specific quantity represented by a number to written symbols. They make abstract representations of problems as they

		solve them, for example by writing equations. They can also think about those symbols in relation to the problem to make sense of the quantities in context.
	MP.3 Construct viable arguments and critique the reasoning of others.	Third graders refine their mathematical communication skills by using words (written and spoken) and symbols (equations and expressions) to clarify their thinking. They support the representations they have made with sketches or objects, and they explain and justify their own strategies and solutions. They also ask specific questions to better understand and evaluate other students' reasoning
Modeling & Using Tools	MP.4 Model with mathematics.	Third graders represent mathematical situations with numbers, words, sketches, actions, charts, graphs, expressions, arrays, and ratio tables. They learn to connect these models and explain the connections among them. They use models not only as a way to represent problems, but also as tools for solving them and developing a deeper understanding of the mathematics
	MP.5 Use appropriate tools strategically.	Third graders learn to consider the tools, both concrete and abstract, at their disposal and select the ones that will be most useful to them in solving a particular mathematical problem or performing a particular task. For example, they learn to use estimation as a tool for solving problems and checking their answers. When faced with problems requiring a finite, exhaustive number of solutions, they generate organized lists or tables to ensure that they've found them all. If they are measuring the length of an object, they select a measuring device with appropriate units and an appropriate degree of precision. To use tools strategically, students must understand the requirements of the task, their own needs and strengths, and the capabilities of the tools available to them
Seeing Structure & Generalizing	MP.7 Look for and make use of structure.	When considering mathematical situations and solving problems, third graders seek out patterns and notice structure. They use what they notice to solve problems and develop deeper conceptual understandings
	#8 Look for and express regularity in repeated reasoning.	Third graders notice repetition when solving problems and use that repetition to develop more efficient strategies for solving similar problems.

		They also learn to pause regularly while solving problem strings or multi-part problems in order to evaluate their work and be sure their answers so far make sense.

Priority Standard Clusters

3.OA.A Represent and solve problems involving multiplication and division.
- *3.OA.1* Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5 × 7.
- *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.
- *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.B Understand properties of multiplication and the relationship between multiplication and division.
- *3.OA.5* Apply properties of operations as strategies to multiply and divide. Examples: 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.)
- *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.C Multiply and divide within 100.
- *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. By the end of Grade 3, know from memory all products of two one-digit numbers.

3.OA.D Solve problems involving the four operations, and identify and explain patterns in arithmetic.
- *3.OA.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.
- *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 them using properties of operations.

3.NF.A Develop understanding of fractions as numbers.
- *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 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 eg. ½ equals 2/4, 4/6 equals ⅔. Explain why the fractions are equivalent eg. 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 <, >, = and justify the conclusions, eg. by using a visual fraction model.

3.MD.A Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
- *3.MD.1* Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
- *3.MD.2* Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).6 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.

3.MD.C Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
- *3.MD.5* Recognize area as an attribute of plane figures and understand concepts of area measurement.
  - ○ (a) A square with side lengths 1 unit, called "a unit square", is said to have "1 square unit" of area and can be used to measure area.
  - ○ (b) A 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.6* Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvise units).
- *3.MD.7* Relate area to the operations of multiplication and division.
  - ○ (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 axb and and axc.. Use area models to represent the distributive property in mathematical reasoning.
  - ○ (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.

Supporting Standard Clusters

3.MD.B Represent and interpret data.
- *3.MD.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. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
- *3.MD.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.

3.G.A Reason with shapes and their attributes.
- *3.G.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.
- *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.NBT.A Use place value understanding and properties of operations, and identify and explain patterns in arithmetic.
- *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 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
- *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.MD.D Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.
- *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.

Unit 1 - Addition & Subtraction Patterns

Unit Overview: This unit focuses on patterns in addition and subtraction facts, the patterns of adding 10s, measuring and problem solving.

Unit Standards

Priority Standards
3.OA.D Solve problems involving the four operations, and identify and explain patterns in arithmetic.
- *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 them using properties of operations.

Supporting Standards
3.NBT.A Use place value understanding and properties of operations, and identify and explain

patterns in arithmetic.
- *3.NBT.2* Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

2nd Grade Priority Standards - Reviewed in Unit
2.OA.A Represent and solve problems involving addition and subtraction.
- *2.OA.1* Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.1
2.OA.B Add and subtract within 20
- *2.OA.2* Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.
2.NBT.B Use place value understanding and properties of operations to add and subtract.
- *2.NBT.5* Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
2.MD.B Relate addition and subtraction to length.
- *2.MD.5* Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

Learning Targets

3rd Grade Priority:

Mathematical Practice Standard Connections		
Habits of Mind	**MP.1** ● Module 1, Session 1-2 ● Module 2, Session 3 ● Module 4, Session 1	**MP.6** ● Module 2, Session 4 ● Module 3, Session 1& 3
Reasoning & Explaining	**MP.2** ● Module 1, Session 1 ● Module 2, Session 1, 4 ● Module 4, Session 1, 4 & 5	**MP.3** ● Module 1, Session 2 ● Module 2, Session 4 ● Module 3, Session 3 ● Module 4, Session 2
Modeling & Tools	**MP.4** ● Module 1, Session 1-3 ● Module 2, Session 3 ● Module 3, Session 2, 5 ● Module 4, Session 2, 4 & 5	**MP.5** ● Module 3, Session 1
Seeing Structure & Generalizing	**MP.7** ● Module 1, Session 1-5 ● Module 2, Session 2 ● Module 3, Session 2 & 4	**MP.8** ● Module 1, Session 4-5 ● Module 2, Session 1-2 ● Module 3, Session 5

3rd Grade Priority:
- I identify patterns in addition and multiplication tables and explain them using what I know about how numbers work. (3.OA.9)

- Module 1, Session 4-5: The Addition Table
- Module 2, Session 1-2: The Subtraction Table
- Module 3, Session 5: Strings & Strategies

3rd Grade Supporting:
- I quickly and easily solve addition/subtraction problems within 1,000 using strategies and algorithms. (3.NBT.2)
  - Module 2, Session 4: Workplace 1D Subtraction Bingo
  - Module 3, Session 3: Adding Lengths Forum
  - Module 3, Session 4: Workplace 1E Carrot Grab
  - Module 4, Session 1: Workplace 1F Rabbit Tracks
  - Module 4, Session 3: Two-Digit Addition Story Problems Forum
  - Module 4, Session 5: Multi-Step Subtraction Problems

2nd Grade Priority Review:
- I solve an addition number story or write a number story to describe a picture or number sentences. (2.OA.1)
  - I solve one and two step addition/subtraction number stories and write a matching open number model with a variable for the unknown in all positions. (2.OA.1)
  - Module 2, Session 1: The Subtraction Table
  - Module 4, Session 2: Two-Digit Addition Story Problems
  - Module 4, Session 4: Strategies for Subtraction Two-Digit Numbers
- I fluently add/subtract within 20 using mental strategies. (2.OA.2)
  - Module 1, Session 4-5: The Addition Table
  - Module 2, Session 1-2: The Subtraction Table
  - Module 2, Session 4: Workplace 1D
- I fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. (2.NBT.5)
  - Module 4, Session 2: Two--Digit Addition Story Problems
  - Module 4, Session 4: Strategies for Subtracting Two-Digit Numbers
- I use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units using drawings and equations with a symbol for the unknown. (2.MD.5)
  - Module 3, Session 2: Adding Lengths

Assessment Evidence

Performance Assessment Options	**Other assessment options**
May include, but are not limited to the following:	*May include, but are not limited to the following:*
● Bridges Unit Pre Assessment ● Bridges Unit Checkpoints ● Bridges Unit Post Assessment	● Bridges Unit Observational Assessments ● Student Work Samples ● Classroom Exit Tickets

Digital Tools & Supplementary Resources

Bridges Intervention
ALEKS and Dreambox

Unit 2 - Introduction to Multiplication

Unit Overview: This unit introduces multiplication by immersing students in a wide variety of multiplicative situations. When solving problems that are embedded in different contexts and that invite them to think of the operation in different ways, students make use of a variety of models for multiplication, including equal groups, arrays the number line, and ratio tables. They also apply the associative and distributive properties to develop efficient, reliable, and generalizable strategies for multiplying. They track these strategies on a multiplication table featuring products from 0 to 100 and apply what they have learned by solving problems that involve scaled graphs and story problems with multiple steps and operations.

Unit Standards

Priority Standards
3.OA.A Represent and solve problems involving multiplication and division.
- 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. For example, describe a context in which a total number of objects can be expressed as 5 x 7.
- 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.
- 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 x ? = 48, 5 = ? / 3, 6 x 6 = ?

3.OA.B Understand properties of multiplication and the relationship between multiplication and division.
- 3.OA.5 Apply properties of operations as strategies to multiply and divide. Examples: If 6 x 4 = 24 is known, then 4 x 6 = 24 is also known. (Commutative property of multiplication.) 3 x 5 x 2 can be found by 3 x 5 = 15, then 15 x 2 = 30, or by 5 x 2 = 10, then 3 x 10 = 30. (Associative Property of multiplication.) Knowing that 8 x 5 = 40 and 8 x 2 = 16, one can find 8 x 7 as 8 x (5 + 2) = (8 x 5) + (8 x 2) = 40 + 16 = 56. (Distributive property.)
- 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.C Multiply and divide within 100.
- 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 x 5 = 40, one knows 40 / 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

3.OA.D Solve problems involving the four operations, and identify and explain patterns in arithmetic.
- 3.OA. 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.
- 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 them using properties of operations.

Supporting Standards
3.MD.B Represent and interpret data.
- *3.MD.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. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.

Learning Targets

3rd Grade Priority:

Mathematical Practice Standard Connections		
Habits of Mind	**MP.1** ● Module 1, Sessions 1 - 3 & 5 ● Module 2, Session 3	**MP.6** ● Module 1, Session 3 ● Module 4, Session 2 & 4
Reasoning & Explaining	**MP.2** ● Module 1, Session 2 & 6 ● Module 2, Session 5 ● Module 3, Session 1	**MP.3** ● Module 1, Session 1, 4 & 6 ● Module 2, Session 5
Modeling & Tools	**MP.4** ● Module 2, Session 2 ● Module 3, Sessions 3 - 4 ● Module 4, Session 1 & 3	**MP.5** ● Module 1, Session 5 ● Module 3, Session 5 ● Module 4, Session 2 - 4
Seeing Structure & Generalizing	**MP.7** ● Module 1, Sessions 3 & 7 ● Module 2, Sessions 1 - 2 ● Module 3, Sessions 2 - 5 ● Module 4, Session 1	**MP.8** ● Module 2, Session 1 & 8 ● Module 3, Sessions 1 - 4

3rd Grade Priority:
- I understand multiplication by thinking about groups of objects. (3.OA.1)
  - Module 1, Session 1: The Pet Store
  - Module 1, Session 3: Stamps & Assessment Reflections
  - Module 1, Session 4: Stamps
  - Module 1, Session 5: Seascape Problems
  - Module 1, Session 6: Seascape Forum
  - Module 2, Session 1: Count-Arounds
  - Module 2, Session 3: Watertown's WIndow Washer
  - Module 2, Session 5: The Watertown Post Office
  - Module 3, Session 2: Price Lists
  - Module 3, Session 3: Multiplication Strategies, Part 1 of 2
  - Module 3, Session 4: Multiplication Strategies, Part 2 of 2
  - Module 4, Session 3: Library Books Problems
- I solve multiplication and/or division number stories and write the matching number sentence (3.OA.3)
  - Module 1, Session 1: The Pet Store
  - Module 1, Session 3: Stamps & Assessment Reflections
  - Module 1, Session 4: Stamps

- ○ Module 1, Session 5: Seascape Problems
- ○ Module 1, Session 6: Seascape Forum
- ○ Module 2, Session 1: Count-Arounds
- ○ Module 3, Session 1: Doubling String & Pet Store Story Problems
- ○ Module 3, Session 2: Price Lists
- I find the missing number in a multiplication and/or division number sentences (3.OA.4)
  - ○ Module 2, Session 3: Watertown's WIndow Washer
  - ○ Module 2, Session 5: The Watertown Post Office
  - ○ Module 3, Session 1: Doubling String & Pet Store Story Problems
- I multiply using the Commutative Property (turn-around facts). (3.OA.5)
  - ○ Module 1, Session 1: The Pet Store
  - ○ Module 1, Session 3: Stamps & Assessment Reflections
  - ○ Module 3, Session 2: Price Lists
  - ○ Module 3, Session 3: Multiplication Strategies, Part 1 of 2
  - ○ Module 3, Session 4: Multiplication Strategies, Part 2 of 2
- I find the answer to a division problem by thinking of the missing factor in a multiplication problem. (3.OA.6)
  - ○ Module 3, Session 1: Doubling String & Pet Store Story Problems
- I easily and quickly multiply and/or divide within 100 from memory. (3.OA.7)
  - ○ Module 2, Session 3: Watertown's Window Washer
  - ○ Module 2, Session 5: The Watertown Post Office
  - ○ Module 3, Session 1: Doubling String & Pet Store Story Problems
  - ○ Module 3, Session 2: Price Lists
  - ○ Module 3, Session 3: Multiplication Strategies, Part 1 of 2
  - ○ Module 3, Session 4: Multiplication Strategies, Part 2 of 2
  - ○ Module 4, Session 2: Library Books Data
  - ○ Module 4, Session 3: Library Books Problems
- I solve two-step word problems by writing a number model with a variable (letter) in place of the number I don't know. (3.OA.8)
  - ○ Module 4, Session 2: Library Books Data
  - ○ Module 4, Session 3: Library Books Problems
- I identify patterns in addition and multiplication tables and explain them using what I know about how numbers work. (3.OA.9)
  - ○ Module 1, Session 3: Stamps & Assessment Reflections
  - ○ Module 1, Session 4: Stamps
  - ○ Module 1, Session 5: Seascape Problems
  - ○ Module 1, Session 6: Seascape Forum
  - ○ Module 2, Session 1: Count-Arounds
  - ○ Module 2, Session 2: Cube Trains & Multiple Strips
  - ○ Module 3, Session 2: Price Lists
  - ○ Module 3, Session 3: Multiplication Strategies, Part 1 of 2
  - ○ Module 3, Session 4: Multiplication Strategies, Part 2 of 2
  - ○

3rd Grade Supporting:
- I use data to create a bar graph or pictograph, including those with scales greater than 1. (3.MD.3)
  - ○ Module 3, Session 5: Ice Cream Survey

○	Module 4, Session 1: Book Lovers Survey
○	Module 4, Session 2: Library Books Data

Assessment Evidence

Performance Assessment Options	Other assessment options
May include, but are not limited to the following:	*May include, but are not limited to the following:*
● Bridges Unit Pre Assessment	● Bridges Unit Observational
● Bridges Unit Checkpoints	Assessments
● Bridges Unit Post Assessment	● Student Work Samples
	● Classroom Exit Tickets

Digital Tools & Supplementary Resources

Bridges Intervention
ALEKS and Dreambox

Unit 3 - Multi-Digit Addition & Subtraction

Unit Overview: This unit extends student thinking with place value, multidigit addition and subtraction and problem solving. The idea of rounding and estimation are used to check results of addition and subtraction computation. By the end of the unit, the traditional algorithm is introduced.

Unit Standards

Priority Standards
3.OA.D Solve problems involving the four operations, and identify and explain patterns in arithmetic.
- *3.OA.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.

Supporting Standards
3.NBT.A Use place value understanding and properties of operations, and identify and explain patterns in arithmetic.
- *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 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Learning Targets

3rd Grade Priority:

Mathematical Practice Standard Connections		
Habits of Mind	**MP.1** ● Module 1, Session 1	**MP.6** ● Module 3, Session 4

	● Module 1, Session 5 ● Module 2, Session 1 ● Module 2, Session 3 ● Module 2, Session 4 ● Module 3, Session 1 ● Module 4, Session 5	
Reasoning & Explaining	**MP.2** ● Module 1, Session 1 ● Module 1, Session 2 ● Module 1, Session 3 ● Module 1, Session 4 ● Module 2, Session 1 ● Module 2, Session 4 ● Module 3, Session 2 ● Module 4, Session 2 ● Module 4, Session 3 ● Module 4, Session 4 ● Module 4, Session 5	**MP.3** ● Module 1, Session 6 ● Module 2, Session 2 ● Module 2, Session 5 ● Module 3, Session 3 ● Module 3, Session 4 ● Module 4, Session 2 ● Module 4, Session 3 ● Module 4, Session 4
Modeling & Tools	**MP.4** ● Module 1, Session 5 ● Module 1, Session 6 ● Module 2, Session 3 ● Module 2, Session 5 ● Module 3, Session 1 ● Module 3, Session 3	**MP.5** ● Module 1, Session 2 ● Module 2, Session 4 ● Module 4, Session 2 ● Module 4, Session 4
Seeing Structure & Generalizing	**MP.7** ● Module 2, Session 2 ● Module 3, Session 2 ● Module 4, Session 1	**MP.8** ● Module 1, Session 3 ● Module 1, Session 4 ● Module 4, Session 1

3rd Grade Priority:
- I solve two-step word problems using addition, subtraction, multiplication, and/or division. (3.OA.8)
    - Module 1, Session 5: Three-Digit Addition Story Problem
    - Module 1, Session 6: Three-Digit Addition Story Problem Forum
    - Module 2, Session 2: Constant Difference
    - Module 2, Session 4: Charting Subtraction Strategies
    - Module 3, Session 1: Round & Add Hundreds

3rd Grade/Course Supporting:
- I can use place value to help me round whole numbers to the nearest 100. (3.NBT.1)
    - Module 1, Session 2: Rounding to the Nearest Ten
    - Module 1, Session 3: Round & Add Tens
    - Module 1, Session 4: Rounding to the Nearest Hundred
    - Module 2, Session 1: Three-Digit Subtraction Story Problems
    - Module 3, Session 1: Round & Add Hundreds

- - Module 3, Session 3: About How Far?
    - Module 3, Session 4: Solving Travel Miles Problems
  - I quickly and easily solve addition problems within 1,000 using strategies and algorithms. (3.NBT.2)
    - Module 1, Session 3: Round & Add Tens
    - Module 1, Session 5: Three-Digit Addition Story Problem
    - Module 1, Session 6: Three-Digit Addition Story Problem Forum
    - Module 3, Session 1: Round & Add Hundreds
    - Module 3, Session 3: About How Far?
    - Module 3, Session 4: Solving Travel Miles Problems
    - Module 4, Session 1: Exploring the Algorithm for Addition
    - Module 4, Session 2: Think Before You Add
  - I quickly and easily solve subtraction problems within 1,000 using strategies and algorithms. (3.NBT.2)
    - Module 1, Session 3: Round & Add Tens
    - Module 2, Session 1: Three-Digit Subtraction Story Problems
    - Module 2, Session 2: Constant Difference
    - Module 2, Session 3: Which Makes the Most Sense?
    - Module 2, Session 4: Charting Subtraction Strategies
    - Module 2, Session 5: Subtraction Strategies Forum
    - Module 3, Session 1: Round & Add Hundreds
    - Module 3, Session 3: About How Far?
    - Module 3, Session 4: Solving Travel Miles Problems
    - Module 4, Session 3: Exploring the Algorithm for Subtraction
    - Module 4, Session 4: Think Before You Subtract

Assessment Evidence

Performance Assessment Options
May include, but are not limited to the following:
- Bridges Unit Pre Assessment
- Bridges Unit Checkpoints
- Bridges Unit Post Assessment

Other assessment options
May include, but are not limited to the following:
- Bridges Unit Observational Assessments
- Student Work Samples
- Classroom Exit Tickets

Digital Tools & Supplementary Resources

Bridges Intervention
ALEKS and Dreambox

Unit 4 - Measurement & Fractions

Unit Overview: In the first part of this unit, students explore various forms of measurement, including time, mass and volume. Students tell time to the minute and solve elapsed time problems. They estimate, measure and compare the masses of different objects and work

with volume. Students also solve measurement-related story problems. In the second part of this unit, students are introduced to fractions, using several different models to build, compare and investigate the relationships among unit and common fractions. At the end of the unit, students combine skills to measure lengths to fractions of an inch and display measurement on data plots.

Unit Standards

Priority Standards
- ***3.OA.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.
- ***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 as *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 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 eg. ½ equals 2/4, 4/6 equals ⅔. Explain why the fractions are equivalent eg. 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 <, >, = and justify the conclusions, eg. by using a visual fraction model.
- ***3.MD.1*** Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
- ***3.MD.2*** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).6 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.

Supporting Standards
- ***3.MD.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.
- ***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.

Learning Targets

3rd Grade Priority:

Mathematical Practice Standard Connections		
Habits of Mind	**MP.1** ● Module 1, Session 1, 3 ● Module 2, Session 3, 4, 5 ● Module 3, Session 3, 5	**MP.6** ● Module 1, Session 1, 2, 5, 6 ● Module 2, Session 1, 2 ● Module 3, Session 5 ● Module 4, Session 1
Reasoning & Explaining	**MP.2** ● Module 1, Session 3, 4 ● Module 2, Session 5 ● Module 3, Session 1, 4	**MP.3** ● Module 2, Session 4 ● Module 3, Session 3
Modeling & Tools	**MP.4** ● Module 2, Session 3 ● Module 3, Session 1, 2, 4 ● Module 4, Session 2, 3	**MP.5** ● Module 1, Session 5, 6 ● Module 2, Session 1, 2 ● Module 4, Session 1
Seeing Structure & Generalizing	**MP.7** ● Module 4, Session 2, 3	**MP.8** ● Module 1, Session 2, 4 ● Module 3, Session 2

3rd Grade Priority:
- I solve two-step word problems using addition, subtraction, multiplication, and/or division. (3.OA.8)
    - Module 2, Session 4: More Measurement Problems
    - Module 2, Session 5: Multi-Step Measurement Problems Forum
- I show and understand that fractions represent equal parts of a whole, where the numerator is a quantity and the denominator is the total number of parts in the whole. (3.NF.1)
    - Module 3, Session 1: Fair Shares, Unit Fractions
    - Module 3, Session 2: Comparing & Ordering Unit Fractions
    - Module 3, Session 3: Pattern Block Fractions
    - Module 3, Session 4: Fractions as Distances
    - Module 4, Session 2: Gathering & Recording Beanstalk Data
- I label fractions on a number line because I know the space between any two whole numbers on the number line can be thought of as a whole. (3.NF.2a)
    - Module 3, Session 3: Pattern Block Fractions
    - Module 3, Session 4: Fractions as Distances
    - Module 3, Session 5: Fractions on the Number Line
    - Module 4, Session 1: Creating & Measuring Beanstalks
    - Module 4, Session 2: Gathering & Recording Beanstalk Data
- I show fractions on a number line by marking off equal parts between two whole numbers. (3.NF.2b)
    - Module 3, Session 5: Fractions on the Number Line

- I recognize, write/show, and explain simple equivalent fractions. (3.NF.3b)
  - Module 3, Session 3: Pattern Block Fractions
- I recognize fractions that are equal to whole numbers. (3.NF.3c)
  - Module 3, Session 3: Pattern Block Fractions
- I compare two fractions with the same numerator or denominator. (3.NF.3d)
  - Module 3, Session 2: Comparing & Ordering Fractions
  - Module 3, Session 4: Fractions as Distances
  - Module 3, Session 5: Fractions on the Number Line
- I compare fractions using symbols >, <, = and prove my comparison by using models. (3.NF.3d)
  - Module 3, Session 3: Pattern Block Fractions
  - Module 3, Session 4: Fractions as Distances
  - Module 3, Session 5: Fractions on the Number Line
- I show and tell time on an analog clock to the nearest minute. (3.MD.1)
  - Module 1, Session 2: Telling Time
  - Module 1, Session 3: Time on a Number Line
  - Module 2, Session 1: Measuring Liquid Volume
- I calculate elapsed-time in word problems. (3.MD.1)
  - Module 1, Session 3: Time on a Number Line
  - Module 2, Session 1: Measuring Liquid Volume
  - Module 2, Session 3: Measurement Story Problems
  - Module 2, Session 4: More Measurement Problems
  - Module 2, Session 5: Multi-Step Measurement Problems Forum
- I estimate and measure weight (grams and kilograms) and capacity (milliliters and liters) using standard units. (3.MD.2)
  - Module 1, Session 4: Measurement - Big, Strong, Fast
  - Module 1, Session 5: Measuring Mass
  - Module 1, Session 6: Estimate, Measure & Compare the Mass
  - Module 2, Session 1: Measuring Liquid Volume
  - Module 2, Session 2: Measurement Scavenger Hunt
- I use four operations to solve one-step word problems involving masses or volumes given the same units (3.MD.2)
  - Module 1, Session 4: Measurement - Big, Strong, Fast
  - Module 1, Session 5: Measuring Mass
  - Module 1, Session 6: Estimate, Measure & Compare the Mass
  - Module 2, Session 1: Measuring Liquid Volume
  - Module 2, Session 3: Measurement Story Problems
  - Module 2, Session 4: More Measurement Problems
  - Module 2, Session 5: Multi-Step Measurement Problems Forum

3rd Grade Supporting:
- I measure line segments and objects to the nearest 1/4 inch. (3.MD.4)
  - Module 4, Session 1: Creating & Measuring Beanstalks
- I measure line segments and objects to the nearest ½ centimeter. (3.MD.4)
  - Module 2, Session 2: Measurement Scavenger Hunt
- I use data, including measurements to the nearest ½ or ¼ inch, to create a representation (line plot). (3.MD.4)
  - Module 4, Session 2: Gathering & Recording Beanstalk Data

○ Module 4, Session 3: Beanstalk Leaf Line Plots
● I divide shapes into equal parts with equal areas and show these parts as fractions. (3.G.2)
    ○ Module 3, Session 1: Fair Shares, Unit Fractions
    ○ Module 3, Session 2: Comparing & Ordering Fractions
    ○ Module 3, Session 3: Pattern Block Fractions

Assessment Evidence

Performance Assessment Options
May include, but are not limited to the following:
- Bridges Unit Pre Assessment
- Bridges Unit Checkpoints
- Bridges Unit Post Assessment

Other assessment options
May include, but are not limited to the following:
- Bridges Unit Observational Assessments
- Student Work Samples
- Classroom Exit Tickets

Digital Tools & Supplementary Resources

Bridges Intervention
ALEKS and Dreambox

Unit 5 - Multiplication, Division & Area

Unit Overview: Students will study multiplication and how it relates to division. Students will build arrays, but use them to model and solve division as well as multiplication problems.

Unit Standards

Priority Standards
3.OA.A Represent and solve problems involving multiplication and division.
- *3.OA.1* Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5 × 7.
- *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.
- *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.B Understand properties of multiplication and the relationship between multiplication and division.
- *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.C Multiply and divide within 100.

- *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. By the end of Grade 3, know from memory all products of two one-digit numbers.

3.OA.D Solve problems involving the four operations, and identify and explain patterns in arithmetic.
- *3.OA.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.

3.MD.C Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
- *3.MD.5* Recognize area as an attribute of plane figures and understand concepts of area measurement.
  - (a) A square with side lengths 1 unit, called "a unit square", is said to have "1 square unit" of area and can be used to measure area.
  - (b) A 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.6* Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvise units).
- *3.MD.7* Relate area to the operations of multiplication and division.
  - (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.

Learning Targets

3rd Grade Priority:

Mathematical Practice Standard Connections		
Habits of Mind	**MP.1** ● Module 1, Session 1 ● Module 1, Session 4 ● Module 1, Session 5 ● Module 1, Session 6 ● Module 2, Session 1	**MP.6** ● Module 1, Session 1 ● Module 4, Session 1 ● Module 4, Session 2
Reasoning & Explaining	**MP.2** ● Module 2, Session 3 ● Module 2, Session 4 ● Module 3, Session 4 ● Module 4, Session 4 ● Module 4, Session 5	**MP.3** ● Module 1, Session 4 ● Module 1, Session 5 ● Module 1, Session 6 ● Module 2, Session 1 ● Module 2, Session 4 ● Module 3, Session 1 ● Module 3, Session 2
Modeling & Tools	**MP.4** ● Module 1, Session 2 ● Module 1, Session 3 ● Module 2, Session 2 ● Module 3, Session 1 ● Module 3, Session 2	**MP.5** ● Module 2, Session 3 ● Module 4, Session 3

	● Module 3, Session 3 ● Module 4, Session 1 ● Module 4, Session 2 ● Module 4, Session 3	
Seeing Structure & Generalizing	**MP.7** ● Module 1, Session 3	**MP.8** ● Module 1, Session 2 ● Module 2, Session 8 ● Module 3, Session 3 ● Module 3, Session 4 ● Module 4, Session 4 ● Module 4, Session 5

3rd Grade Priority:
- I understand multiplication by thinking about groups of objects. (3.OA.1)
  - Module 1 Session 2: Connecting Multiplication & Division
  - Module 1 Session 3: Multiplication & Division Arrays
  - Module 1 Session 4-6: Game Store Story Problems - Part 1, 2 & 3
  - Module 2 Session 3: What's Missing? Bingo
  - Module 2 Session 4: True or False?
- I understand division by thinking about how one group can be divided into smaller groups. (3.OA.2)
  - Module 1 Session 2: Connecting Multiplication & Division
  - Module 1 Session 3: Multiplication & Division Arrays
  - Module 1 Session 4-6: Game Store Story Problems - Part 1, 2 & 3
  - Module 2 Session 2: Division Story Problems Forum
  - Module 2 Session 3: What's Missing? Bingo
  - Module 2 Session 4: True or False?
  - Module 3 Session 1: Sharing & Grouping Problems
  - Module 3 Session 2: Sharing & Grouping Forum
  - Module 3 Session 3: Line 'Em Up
- I solve multiplication and/or division number stories and write the matching number sentence (3.OA.3)
  - Module 1 Session 2: Connecting Multiplication & Division
  - Module 1 Session 3: Multiplication & Division Arrays
  - Module 1 Session 4-6: Game Store Story Problems - Part 1, 2 & 3
  - Module 2 Session 1: Division Story Problems & Fact Families
  - Module 2 Session 2: Division Story Problems Forum
  - Module 3 Session 3: Line 'Em Up
  - Module 4 Session 1: Paper Rectangles
- I find the missing number in a multiplication and/or division number sentence (3.OA.4)
  - Module 2 Session 1: Division Story Problems & Fact Families
  - Module 2 Session 3: What's Missing? Bingo
  - Module 2 Session 4: True or False?
  - Module 3 Session 1: Sharing & Grouping Problems
- I find the answer to a division problem by thinking of the missing factor in a multiplication problem. (3.OA.6)
  - Module 1 Session 4-6: Game Store Story Problems - Part 1, 2 & 3

- - Module 2 Session 1: Division Story Problems & Fact Families
  - Module 2 Session 2: Division Story Problems Forum
  - Module 2 Session 3: What's Missing? Bingo
  - Module 2 Session 4: True or False?
  - Module 3 Session 4: Division Capture
  - Module 4 Session 1: Paper Rectangles
- I easily and quickly multiply and/or divide within 100 from memory. (3.OA.7)
  - Module 2 Session 3: What's Missing? Bingo
  - Module 2 Session 4: True or False?
  - Module 3 Session 1: Sharing & Grouping Problems
  - Module 3 Session 2: Sharing & Grouping Forum
  - Module 3 Session 4: Division Capture
- I solve two-step word problems using addition, subtraction, multiplication, and/or division. (3.OA.8)
  - Module 3 Session 1: Sharing & Grouping Problems
  - Module 3 Session 2: Sharing & Grouping Forum
- I solve two-step word problems by writing a number model with a variable (letter) in place of the number I don't know. (3.OA.8)
  - Module 3 Session 1: Sharing & Grouping Problems
- I recognize a square with side lengths 1 unit, called "a unit square", is said to have "1 square unit" of area and can be used to measure area. (3.MD.5a)
  - Module 4 Session 1: Paper Rectangles
  - Module 4 Session 2: Finding Areas Large & Small
  - Module 4 Session 3: Measuring Area in Customary Units
- I recognize a 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.5b)
  - Module 4 Session 1: Paper Rectangles
  - Module 4 Session 2: Finding Areas Large & Small
  - Module 4 Session 3: Measuring Area in Customary Units
- I measure areas by counting unit squares (square cm, square m, square in, square ft, and improvise units). (3.MD.6)
  - Module 4 Session 1: Paper Rectangles
  - Module 4 Session 2: Finding Areas Large & Small
  - Module 4 Session 3: Measuring Area in Customary Units
  - Module 4 Session 4: Rainbow Rectangles
  - Module 4 Session 5: Adding Areas
- I 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. (3.MD.7a)
  - Module 4 Session 1: Paper Rectangles
  - Module 4 Session 2: Finding Areas Large & Small
  - Module 4 Session 3: Measuring Area in Customary Units
  - Module 4 Session 4: Rainbow Rectangles
  - Module 4 Session 5: Adding Areas
- I 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. (3MD.7b)
  - Module 4 Session 4: Rainbow Rectangles
  - Module 4 Session 5: Adding Areas

Assessment Evidence	
Performance Assessment Options *May include, but are not limited to the following:* - Bridges Unit Pre Assessment - Bridges Unit Checkpoints - Bridges Unit Post Assessment	**Other assessment options** *May include, but are not limited to the following:* - Bridges Unit Observational Assessments - Student Work Samples - Classroom Exit Tickets
Digital Tools & Supplementary Resources	
Bridges Intervention ALEKS and Dreambox	

Unit 6 - Geometry
Unit Overview: This unit is designed to develop precise ways to describe, classify and make generalizations about two-dimensional shapes, specifically quadrilaterals. Students will explore polygons , build understanding of attributes and measure area and perimeter.
Unit Standards
Priority Standards: **3.MD.C Geometric measurement: understand concepts of area and relate area to multiplication and to addition.**   *3.MD.5* Recognize area as an attribute of plane figures and understand concepts of area measurement.   (a) A square with side lengths 1 unit, called "a unit square", is said to have "1 square unit" of area and can be used to measure area.   (b) A 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 division.   (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.   (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.   **Supporting Standards:** **3.G.A Reason with shapes and their attributes.**   *3.G.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.

- *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.

Learning Targets

3rd Grade Priority:

Mathematical Practice Standard Connections		
Habits of Mind	**MP.1** ● Module 1, Session 1 ● Module 1, Session 5 ● Module 2, Session 4 ● Module 2, Session 5 ● Module 3, Session 1 ● Module 4, Session 1 ● Module 4, Session 4	**MP.6** ● Module 1, Session 1 ● Module 1, Session 3 ● Module 1, Session 4 ● Module 2, Session 3 ● Module 2, Session 5 ● Module 2, Session 6 ● Module 4, Session 4
Reasoning & Explaining	**MP.2** ● Module 2, Session 1	**MP.3** ● Module 1, Session 2 ● Module 2, Session 4 ● Module 4, Session 2 ● Module 4, Session 3
Modeling & Tools	**MP.4** ● Module 1, Session 2 ● Module 1, Session 3 ● Module 1, Session 4 ● Module 2, Session 2 ● Module 2, Session 6 ● Module 3, Session 2 ● Module 3, Session 3 ● Module 4, Session 1 ● Module 4, Session 2 ● Module 4, Session 3	**MP.5** ● Module 1, Session 5
Seeing Structure & Generalizing	**MP.7** ● Module 2, Session 2 ● Module 2, Session 3 ● Module 3, Session 2 ● Module 3, Session 3	**MP.8** ● Module 2, Session 1 ● Module 3, Session 1 ● Module 3, Session 3

3rd Grade Priority:
- I recognize area as an attribute of plane figures and understand concepts of area measurement. (3.MD.5)
  - Module 3, Session 3: Metric Rectangles
  - Module 3, Session 4: Exploring Halves on a Geoboard
- I 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. (3.MD.7a)
  - Module 3, Session 3: Metric Rectangles
- I 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. (3.MD.7b)
  ○ Module 4, Session 4: Post-Assessment
- I 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. (3.MD.7d)
  ○ Module 4, Session 4: Post-Assessment

3rd Grade/Course Supporting:
- I place shapes into categories based on their attributes (properties). (3.G.1)
  ○ Module 1, Session 2: Attributes of a Rectangle
  ○ Module 1, Session 3: Creating Shape Posters
  ○ Module 1, Session 4: Creating Tangrams
  ○ Module 1, Session 5: Constructing Polygons with Tangrams
  ○ Module 2, Session 1: Making Toothpick Polygons
  ○ Module 2, Session 2: Introducing Geoboard Polygons
  ○ Module 2, Session 3: Sorting Quadrilaterals
  ○ Module 2, Session 4: Guess my Quadrilateral
  ○ Module 2, Session 5: Writing Quadrilateral Riddles
  ○ Module 2, Session 6: Perimeters of Paper Quadrilaterals
  ○ Module 3, Session 2: The 239th Friend: How Many Tables? Part 2
- I name a category of many shapes by looking at their attributes (properties). (3.G.1)
  ○ Module 1, Session 2: Attributes of a Rectangle
  ○ Module 1, Session 3: Creating Shape Posters
  ○ Module 1, Session 4: Creating Tangrams
  ○ Module 1, Session 5: Constructing Polygons with Tangrams
  ○ Module 2, Session 1: Making Toothpick Polygons
  ○ Module 2, Session 2: Introducing Geoboard Polygons
  ○ Module 2, Session 3: Sorting Quadrilaterals
  ○ Module 2, Session 4: Guess my Quadrilateral
  ○ Module 2, Session 5: Writing Quadrilateral Riddles
  ○ Module 2, Session 6: Perimeters of Paper Quadrilaterals
  ○ Module 3, Session 2: The 239th Friend: How Many Tables? Part 2
- I recognize and draw quadrilaterals (shapes with 4 sides), including rhombuses, rectangles, and squares. (3.G.1)
  ○ Module 1, Session 2: Attributes of a Rectangle
  ○ Module 1, Session 3: Creating Shape Posters
  ○ Module 1, Session 4: Creating Tangrams
  ○ Module 1, Session 5: Constructing Polygons with Tangrams
  ○ Module 2, Session 1: Making Toothpick Polygons
  ○ Module 2, Session 2: Introducing Geoboard Polygons
  ○ Module 2, Session 3: Sorting Quadrilaterals
  ○ Module 2, Session 4: Guess my Quadrilateral
  ○ Module 2, Session 5: Writing Quadrilateral Riddles
  ○ Module 2, Session 6: Perimeters of Paper Quadrilaterals
  ○ Module 3, Session 2: The 239th Friend: How Many Tables? Part 2
- I explain how quadrilaterals (shapes with 4 sides) are similar and different. (3.G.1)

- - Module 1, Session 2: Attributes of a Rectangle
    - Module 1, Session 3: Creating Shape Posters
    - Module 1, Session 4: Creating Tangrams
    - Module 1, Session 5: Constructing Polygons with Tangrams
    - Module 2, Session 1: Making Toothpick Polygons
    - Module 2, Session 2: Introducing Geoboard Polygons
    - Module 2, Session 3: Sorting Quadrilaterals
    - Module 2, Session 4: Guess my Quadrilateral
    - Module 2, Session 5: Writing Quadrilateral Riddles
    - Module 2, Session 6: Perimeters of Paper Quadrilaterals
    - Module 3, Session 2: The 239th Friend: How Many Tables? Part 2
    - Module 4, Session 4: Post-Assessment
- I divide shapes into equal parts with equal areas and show these parts as fractions. (3.G.2)
    - Module 4, Session 1: Exploring Halves on a Geoboard
    - Module 4, Session 3: Geoboard Quilt Blocks
    - Module 4, Session 4: Post-Assessment

Assessment Evidence

Performance Assessment Options
May include, but are not limited to the following:
- Bridges Unit Pre Assessment
- Bridges Unit Checkpoints
- Bridges Unit Post Assessment

Other assessment options
May include, but are not limited to the following:
- Bridges Unit Observational Assessments
- Student Work Samples
- Classroom Exit Tickets

Digital Tools & Supplementary Resources

Bridges Intervention
ALEKS and Dreambox

Unit 7 - Extending Multiplication & Fractions

Unit Overview: In this unit, students learn to multiply single digits by multiples of 10. That skill is then extended into building and sketching 1-digit by 2-digit multiplication combinations. Working with extended facts provides opportunities to review the commutative and distributive properties and tap into the power of the associative property of multiplication. Students are introduced to linear and area models (rulers, egg cartons, circle graphs) for fractions that allow them to see fractions as parts of a set as well as parts of a whole. The unit ends with data collection, representation and interpretation.

Unit Standards

Priority Standards
- ***3.OA.1*** Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of

objects can be expressed as 5 × 7.

- **_3.OA.5_** Apply properties of operations as strategies to multiply and divide. Examples: 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.)
- **_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. 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 standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
- **_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 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 eg. ½ equals 2/4, 4/6 equals ⅔. Explain why the fractions are equivalent eg. 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 <, >, = and justify the conclusions, eg. by using a visual fraction model.
- **_3.MD.7_** Relate area to the operations of multiplication and division.
    - (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. Use area models to represent the distributive property in mathematical reasoning.

Supporting 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.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.

Learning Targets

3rd Grade Priority:

Mathematical Practice Standard Connections		
Habits of Mind	**MP.1** ● Module 1, Session 2 ● Module 3, Session 1, 3 ● Module 4, Session 2	**MP.6** ● Module 2, Session 4
Reasoning & Explaining	**MP.2** ● Module 2, Session 1, 3 ● Module 3, Session 5 ● Module 4, Session 1	**MP.3** ● Module 2, Session 5 ● Module 3, Session 5
Modeling & Tools	**MP.4** ● Module 1, Session 2, 3, 4 ● Module 2, Session 2, 4 ● Module 3, Session 1, 2, 3, 4 ● Module 4, Session 1, 2, 3, 4	**MP.5** ● Module 2, Session 2
Seeing Structure & Generalizing	**MP.7** ● Module 1, Session 3, 4, 5 ● Module 2, Session 1 ● Module 3, Session 2 ● Module 4, Session 3, 4	**MP.8** ● Module 1, Session 5 ● Module 2, Session 3, 5 ● Module 3, Session 4

3rd Grade Priority:
- I understand multiplication by thinking about groups of objects. (3.OA.1)
  - Module 1, Session 2: Multiplication Stories & Equations
  - Module 1, Session 3: Multiplying by Eleven
  - Module 1, Session 4: Multiplying by Twelve
- I multiply using the Commutative Property (turn-around facts). (3.OA.5)
  - Module 1, Session 3: Multiplying by Eleven
  - Module 1, Session 4: Multiplying by Twelve
  - Module 2, Session 3: Mystery Arrays
  - Module 2, Session 5: Sharing Multiplication Posters
  - Module 3, Session 1: Fractions on a Ruler
- I multiply three 1-digit numbers using the Associative Property. (3.OA.5)
  - Module 1, Session 3: Multiplying by Eleven
  - Module 1, Session 4: Multiplying by Twelve
  - Module 2, Session 5: Sharing Multiplication Posters
  - Module 3, Session 1: Fractions on a Ruler
- I multiply a 2-digit by 1-digit number using the Distributive Property. (3.OA.5)
  - Module 1, Session 3: Multiplying by Eleven
  - Module 1, Session 4: Multiplying by Twelve
  - Module 2, Session 1: Building Arrays for One-by-Two-Digit Multiplication Problems
  - Module 2, Session 2: Sketching Arrays for One-by-Two-Digit Multiplication
  - Module 2, Session 3: Mystery Arrays
  - Module 2, Session 4: Making Posters for One-by-Two Arrays

- - Module 2, Session 5: Sharing Multiplication Posters
  - Module 3, Session 1: Fractions on a Ruler
- I easily and quickly multiply and/or divide within 100 from memory. (3.OA.7)
  - Module 1, Session 2: Multiplication Stories & Equations
  - Module 1, Session 4: Multiplying by Twelve
  - Module 2, Session 2: Sketching Arrays for One-by-Two-Digit Multiplication
  - Module 2, Session 5: Sharing Multiplication Posters
- I solve two-step word problems using addition, subtraction, multiplication, and/or division. (3.OA.8)
  - Module 1, Session 2: Multiplication Stories & Equations
  - Module 1, Session 3: Multiplying by Eleven
  - Module 1, Session 4: Multiplying by Twelve
  - Module 1, Session 5: Multiplying Single Digits by Multiples of Ten
- I solve two-step word problems by writing a number model with a variable (letter) in place of the number I don't know. (3.OA.8)
  - Module 1, Session 2: Multiplication Stories & Equations
  - Module 1, Session 3: Multiplying by Eleven
  - Module 1, Session 4: Multiplying by Twelve
  - Module 1, Session 5: Multiplying Single Digits by Multiples of Ten
- I use mental math to figure out if the answers to two-step word problems make sense. (3.OA.8)
  - Module 1, Session 2: Multiplication Stories & Equations
  - Module 1, Session 3: Multiplying by Eleven
  - Module 2, Session 1: Building Arrays for One-by-Two-Digit Multiplication Problems
  - Module 2, Session 3: Mystery Arrays
- I show and understand that fractions represent equal parts of a whole, where the numerator is a quantity and the denominator is the total number of parts in the whole. (3.NF.1)
  - Module 3, Session 1: Fractions on a Ruler
  - Module 3, Session 2: Introduction to Egg Carton Fractions
  - Module 3, Session 3: Exploring Egg Carton Fractions
  - Module 3, Session 4: Equivalent Egg Carton Fractions
  - Module 3, Session 5: Dozens of Eggs
  - Module 4, Session 3: Surveys & Fractions
  - Module 4, Session 4: Pull & Graph
- I label fractions on a number line because I know the space between any two whole numbers on the number line can be thought of as a whole. (3.NF.2a)
  - Module 3, Session 1: Fractions on a Ruler
  - Module 3, Session 2: Introduction to Egg Carton Fractions
  - Module 3, Session 3: Exploring Egg Carton Fractions
  - Module 3, Session 4: Equivalent Egg Carton Fractions
  - Module 4, Session 1: Racing Fractions
  - Module 4, Session 2: Pizza Fractions
- I show fractions on a number line by marking off equal parts between two whole numbers. (3.NF.2b)
  - Module 3, Session 1: Fractions on a Ruler
  - Module 3, Session 2: Introduction to Egg Carton Fractions
  - Module 3, Session 3: Exploring Egg Carton Fractions
  - Module 3, Session 4: Equivalent Egg Carton Fractions

- - Module 4, Session 2: Pizza Fractions
- I understand two fractions are equal if they are the same size or one the same point on a number line. (3.NF.3a)
  - Module 3, Session 1: Fractions on a Ruler
  - Module 3, Session 2: Introduction to Egg Carton Fractions
  - Module 3, Session 4: Equivalent Egg Carton Fractions
  - Module 4, Session 1: Racing Fractions
  - Module 4, Session 3: Surveys & Fractions
  - Module 4, Session 4: Pull & Graph
- I recognize, write/show, and explain simple equivalent fractions. (3.NF.3b)
  - Module 3, Session 1: Fractions on a Ruler
  - Module 3, Session 3: Exploring Egg Carton Fractions
  - Module 3, Session 4: Equivalent Egg Carton Fractions
  - Module 3, Session 5: Dozens of Eggs
  - Module 4, Session 1: Racing Fractions
  - Module 4, Session 2: Pizza Fractions
  - Module 4, Session 3: Surveys & Fractions
  - Module 4, Session 4: Pull & Graph
- I recognize fractions that are equal to whole numbers. (3.NF.3c)
  - Module 3, Session 1: Fractions on a Ruler
- I compare two fractions with the same numerator or denominator. (3.NF.3d)
  - Module 4, Session 2: Pizza Fractions
- I compare fractions using symbols >, <, = and prove my comparison by using models. (3.NF.3d)
  - Module 3, Session 1: Fractions on a Ruler
- I 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. (3.MD.7b)
  - Module 1, Session 5: Multiplying Single Digits by Multiples of Ten
  - Module 2, Session 2: Sketching Arrays for One-by-Two-Digit Multiplication
  - Module 2, Session 4: Making Posters for One-by-Two Arrays
  - Module 2, Session 5: Sharing Multiplication Posters
- I 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. Use area models to represent the distributive property in mathematical reasoning. (3.MD.7c)
  - Module 2, Session 1: Building Arrays for One-by-Two-Digit Multiplication Problems
  - Module 2, Session 2: Sketching Arrays for One-by-Two-Digit Multiplication
  - Module 2, Session 3: Mystery Arrays
  - Module 2, Session 4: Making Posters for One-by-Two Arrays
  - Module 2, Session 5: Sharing Multiplication Posters

3rd Grade/Course Supporting:
- I divide shapes into equal parts with equal areas and show these parts as fractions. (3.G.2)
  - Module 3, Session 5: Dozens of Eggs
  - Module 4, Session 2: Pizza Fractions
  - Module 4, Session 3: Surveys & Fractions
  - Module 4, Session 4: Pull & Graph
- I can multiply any one-digit whole number by a multiple of 10 (6*20, 4*70) to solve extended

multiplication fact problems and number stories. (3.NBT.3)
- ○ Module 1, Session 3: Multiplying by Eleven
- ○ Module 1, Session 4: Multiplying by Twelve
- ○ Module 1, Session 5: Multiplying Single Digits by Multiples of Ten
- ○ Module 2, Session 1: Building Arrays for One-by-Two-Digit Multiplication Problems
- ○ Module 2, Session 3: Mystery Arrays
- ○ Module 2, Session 4: Making Posters for One-by-Two Arrays
- ○ Module 2, Session 5: Sharing Multiplication Posters

Assessment Evidence

Performance Assessment Options
May include, but are not limited to the following:
- ● Bridges Unit Pre Assessment
- ● Bridges Unit Checkpoints
- ● Bridges Unit Post Assessment

Other assessment options
May include, but are not limited to the following:
- ● Bridges Unit Observational Assessments
- ● Student Work Samples
- ● Classroom Exit Tickets

Digital Tools & Supplementary Resources

Bridges Intervention
ALEKS and Dreambox

Unit 8: Bridge Design & Construction: Data Collection & Analysis

Unit Overview: In the final unit of the year, students learn about different kinds of bridges by reading nonfiction, looking at pictures, doing research, and building their own model bridges. This unit integrates mathematics and science with a primary focus on designing and building model bridges, which are then tested in systematic ways to collect data. Students graph and analyze the data, finding the range and mean, to make conjectures and draw conclusions about effective bridge design and construction.

Unit Standards

Priority Standards
3.NF.A Develop understanding of fractions as numbers.
- ● *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.3* Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
    - ○ (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 <, >, = and justify the conclusions, eg. by using a visual fraction model.

3.MD.A Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

- *3.MD.1* Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
- *3.MD.2* Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).6 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.

3.MD.C Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
- *3.MD.7* Relate area to the operations of multiplication and division.
  - (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.

Supporting Standards
3.MD.B Represent and interpret data.
- *3.MD.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. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
- *3.MD.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.

3.G.A Reason with shapes and their attributes.
- *3.G.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.
- *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.

Learning Targets

3rd Grade Priority:

Mathematical Practice Standard Connections		
Habits of Mind	MP.1 ● Module 1, Session 1, 3-5 ● Module 2, Session 1-3 ● Module 3, Session 2-4 ● Module 4, Session 1 & 4	MP.6 ● Module 1, Session 2 ● Module 3, Session 4-5 ● Module 4, Session 3 & 4
Reasoning & Explaining	MP.2 ● Module 3, Session 1 & 6 ● Module 4, Session 1	MP.3 ● Module 2, Session 4-5 ● Module 3, Session 5 ● Module 4, Session 1
Modeling & Tools	MP.4 ● Module 1, Session 1, 2 ● Module 3, Session 3-4	MP.5 ● Module 1, Session 3 ● Module 2, Session 1, 5

	● Module 4, Session 3	
Seeing Structure & Generalizing	**MP.7** ● Module 1, Session 1 & 3-5 ● Module 2, Session 2-4 ● Module 3, Session 1-4 & 6 ● Module 4, Session 4	**MP.8** ● Module 1, Session 1 ● Module 2, Session 4-5

3rd Grade Priority:
- I show and understand that fractions represent equal parts of a whole, where the numerator is a quantity and the denominator is the total number of parts in the whole. (3.NF.1)
  - Module 2, Session 1: More Measurement Olympics
  - Module 3, Session 1: Planning Strong Bridges
- I compare two fractions with the same numerator or denominator. (3.NF.3d)
  - Module 3, Session 6: Long Bridge Analysis, Part 2
- I compare fractions using symbols >, <, = and prove my comparison by using models. (3.NF.3d)
  - Module 3, Session 5: Long Bridge Analysis, Part 1
  - Module 3, Session 6: Long Bridge Analysis, Part 2
- I show and tell time on an analog clock to the nearest minute. (3.MD.1)
  - Module 2, Session 1: More Measurement Olympics
  - Module 3, Session 1: Planning Strong Bridges
  - Module 3, Session 2: Building Strong Bridges
  - Module 3, Session 4: Planning & Building Long Bridges
  - Module 4, Session 2: Building Longer & Stronger Bridges
- I calculate elapsed time in word problems. (3.MD.1)
  - Module 2, Session 1: More Measurement Olympics
  - Module 4, Session 2: Building Longer & Stronger Bridges
- I estimate and measure weight (grams and kilograms) and capacity (milliliters and liters) using standard units. (3.MD.2)
  - Module 1, Session 2: Three Kinds of Bridges
  - Module 1, Session 4: Building & Testing Paper Beam Bridges
  - Module 1, Session 5: Researching & Testing Arch Bridges
  - Module 2, Session 2: Introducing Suspension Bridges
  - Module 3, Session 2: Building Strong Bridges
  - Module 3, Session 3: Strong Bridge Trial & Analysis
  - Module 3, Session 4: Planning & Building Long Bridges
  - Module 3, Session 5: Long Bridge Analysis, Part 1
- I use four operations to solve one-step word problems involving masses or volumes given the same units (3.MD.2)
  - Module 1, Session 2: Three Kinds of Bridges
  - Module 1, Session 4: Building & Testing Paper Beam Bridges
  - Module 1, Session 5: Researching & Testing Arch Bridges
- I 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. (3.MD.7b)
  - Module 1, Session 2: Three Kinds of Bridges
  - Module 1, Session 4: Building & Testing Paper Beam Bridges
  - Module 4, Session 3: Measuring & Drawing the Final Bridges

3rd Grade/Course Supporting:

- I use data to create a bar graph or pictograph, including those with scales greater than 1. (3.MD.3)
    - Module 1, Session 5: Researching & Testing Arch Bridges
    - Module 2, Session 4: Sorting & Graphing Bridges
    - Module 3, Session 3: Strong Bridge Trial & Analysis
    - Module 4, Session 4: Analyzing Final Results & Drawing Conclusions About Bridges
- I use data from a graph to answer one- and two- step problems. (3.MD.3)
    - Module 1, Session 5: Researching & Testing Arch Bridges
    - Module 2, Session 4: Sorting & Graphing Bridges
    - Module 3, Session 3: Strong Bridge Trial & Analysis
    - Module 4, Session 4: Analyzing Final Results & Drawing Conclusions About Bridges
- I measure line segments and objects to the nearest 1/4 inch. (3.MD.4)
    - Module 1, Session 4: Building & Testing Paper Beam Bridges
    - Module 2, Session 3: Researching & Building Suspension Bridges
    - Module 3, Session 5: Long Bridge Analysis, Part 1
- I measure line segments and objects to the nearest ½ centimeter. (3.MD.4)
    - Module 1, Session 4: Building & Testing Paper Beam Bridges
    - Module 2, Session 3: Researching & Building Suspension Bridges
    - Module 3, Session 5: Long Bridge Analysis, Part 1
- I use data, including measurements to the nearest ½ or ¼ inch, to create a representation (line plot). (3.MD.4)
    - Module 3, Session 5: Long Bridge Analysis, Part 1
- I place shapes into categories based on their attributes (properties). (3.G.1)
    - Module 3, Session 1: Planning Strong Bridges
    - Module 3, Session 4: Planning & BUilding Long Bridges
    - Module 4, Session 3: Measuring & Drawing the Final Bridges
- I name a category of many shapes by looking at their attributes (properties). (3.G.1)
    - Module 2, Session 2: Introducing Suspension Bridges
    - Module 2, Session 5: Exploring Shapes in Bridges
    - Module 4, Session 3: Measuring & Drawing the Final Bridges
- I recognize and draw quadrilaterals (shapes with 4 sides), including rhombuses, rectangles, and squares. (3.G.1)
    - Module 2, Session 5: Exploring Shapes in Bridges
    - Module 3, Session 4: Planning & Building Long Bridges
    - Module 4, Session 3: Measuring & Drawing the Final Bridges
- I explain how quadrilaterals (shapes with 4 sides) are similar and different. (3.G.1)
    - Module 2, Session 5: Exploring Shapes in Bridges
- I divide shapes into equal parts with equal areas and show these parts as fractions. (3.G.2)
    - Module 2, Session 1: More Measurement Olympics
    - Module 2, Session 5: Exploring Shapes in Bridges
    - Module 3, Session 1: Planning Strong Bridges

Assessment Evidence

Performance Assessment Options	Other assessment options

May include, but are not limited to the following:	*May include, but are not limited to the following:*
● Bridges Unit Pre Assessment ● Bridges Unit Checkpoints ● Bridges Unit Post Assessment	● Bridges Unit Observational Assessments ● Student Work Samples ● Classroom Exit Tickets

Digital Tools & Supplementary Resources

Bridges Intervention
ALEKS and Dreambox