

MODULE 1

Topic	Lesson #	Objective	Student Materials	Teacher Materials
A	1	<ul style="list-style-type: none"> Understand equal groups of as multiplication. 	<ul style="list-style-type: none"> 12 counters personal white board 	
A	2	<ul style="list-style-type: none"> Relate multiplication to the array model. 	<ul style="list-style-type: none"> Add or Subtract Using 2 Sprint Personal white board Personal white board with threes array (Template) inserted lemons image from Application Problem 1 sheet of blank paper (Template) inserted 	
A	3	<ul style="list-style-type: none"> Interpret the meaning of factors—the size of the group or the number of groups. 	<ul style="list-style-type: none"> Add Equal Groups Sprint Personal white board 18 counters Personal white board 	
B	4	<ul style="list-style-type: none"> Understand the meaning of the unknown as the size of the group in division. 	<ul style="list-style-type: none"> Repeated Addition as Multiplication Sprint Personal white board 18 counters 	

B	5	<ul style="list-style-type: none"> Understand the meaning of the unknown as the number of groups in division. 	<ul style="list-style-type: none"> Personal white board 18 counters student work from Application Problem 	
B	6	<ul style="list-style-type: none"> Interpret the unknown in division using the array model. 	<ul style="list-style-type: none"> Personal white board Application Problem 	
C	7	<ul style="list-style-type: none"> Demonstrate the commutativity of multiplication, and practice related facts by skip-counting objects in array models. 	<ul style="list-style-type: none"> Personal white board twos array (Fluency Template) blank paper 	
C	8	<ul style="list-style-type: none"> Demonstrate the commutativity of multiplication, and practice related facts by skip-counting objects in array models. 	<ul style="list-style-type: none"> Personal white board 	
C	9	<ul style="list-style-type: none"> Find related multiplication facts by adding and subtracting equal groups in array models. 	<ul style="list-style-type: none"> Multiply by 2 (1–5) (Pattern Sheet) Personal white board threes array no fill (Template) blank paper 	

C	10	<ul style="list-style-type: none"> Model the distributive property with arrays to decompose units as a strategy to multiply. 	<ul style="list-style-type: none"> Multiply by 2 (6–10) (Pattern Sheet) Personal white board 1 sheet of blank paper 	
Mid-Module Assessment				
D	11	<ul style="list-style-type: none"> Model division as the unknown factor in multiplication using arrays and strip diagrams. 	<ul style="list-style-type: none"> Multiply by 3 (1–5) (Pattern Sheet) Personal white board Application Problem 	
D	12	<ul style="list-style-type: none"> Interpret the quotient as the number of groups or the number of objects in each group using units of 2. 	<ul style="list-style-type: none"> Multiply by 3 (6–10) (Pattern Sheet) Personal white board 	
D	13	<ul style="list-style-type: none"> Interpret the quotient as the number of groups or the number of objects in each group using units of 3. 	<ul style="list-style-type: none"> Multiply or Divide by 2 Sprint Personal white board 	
E	14	<ul style="list-style-type: none"> Skip-count objects in models to build fluency with multiplication facts using units of 4. 	<ul style="list-style-type: none"> Multiply or Divide by 3 Sprint Personal white board fours array (Template) 	
E	15	<ul style="list-style-type: none"> Relate arrays to strip diagrams to model the 	<ul style="list-style-type: none"> Multiply by 4 (1–5) (Pattern Sheet) Personal white board 	

		commutative property of multiplication.	<ul style="list-style-type: none"> • blank paper with folded 	
E	16	<ul style="list-style-type: none"> • Use the distributive property as a strategy to find related multiplication facts. 	<ul style="list-style-type: none"> • Multiply by 4 (6–10) (Pattern Sheet) • Personal white board • fours array (Lesson 14 Template) 	
E	17	<ul style="list-style-type: none"> • Model the relationship between multiplication and division. 	<ul style="list-style-type: none"> • Multiply or Divide by 4 Sprint • Personal white board 	
F	18	<ul style="list-style-type: none"> • Apply the distributive property to decompose units. 	<ul style="list-style-type: none"> • Add or Subtract using 5 Sprint • Personal white board 	
F	19	<ul style="list-style-type: none"> • Apply the distributive property to decompose units. 	<ul style="list-style-type: none"> • Personal white board 	
F	20	<ul style="list-style-type: none"> • Solve two-step word problems involving multiplication and division, and assess the reasonableness of answers. 	<ul style="list-style-type: none"> • Add or Subtract using 5 Sprint • Personal white board 	
F	21	<ul style="list-style-type: none"> • Solve two-step word problems involving all four operations, and assess 	<ul style="list-style-type: none"> • Multiply by 5 (1–5) (Pattern Sheet) • Chart paper • markers 	

		the reasonableness of answers.	<ul style="list-style-type: none"> • paper strips (optional for representing strip diagrams) • glue 	
End-of-Module Assessment				

MODULE 2

Topic	Lesson #	Objective	Student Materials	Teacher Materials
A	1	<ul style="list-style-type: none"> • Explore time as a continuous measurement using a stopwatch. 	<ul style="list-style-type: none"> • Personal white board • Stopwatch 	<ul style="list-style-type: none"> • Analog clock for demonstration • Stopwatch and classroom clock
A	2	<ul style="list-style-type: none"> • Solve word problems involving time intervals within 1 hour by counting backward and forward using the number line and clock. 	<ul style="list-style-type: none"> • Personal white board • number line and clock (Template) 	<ul style="list-style-type: none"> • Analog clock for demonstration
A	3	<ul style="list-style-type: none"> • Solve word problems involving time intervals within 1 hour by adding and subtracting on the number line. 	<ul style="list-style-type: none"> • Personal white board • number line (Lesson 3 Template) 	<ul style="list-style-type: none"> • Analog clock for demonstration
B	4	<ul style="list-style-type: none"> • Build and decompose a kilogram to reason about the size and weight of 1 kilogram, 	<ul style="list-style-type: none"> • Personal white board • 1-kilogram benchmark bag of beans (one per pair of students) • digital metric scale • pan balance 	<ul style="list-style-type: none"> • Analog clock for demonstration • 1-kilogram weight

		100 grams, 10 grams, and 1 gram.	<ul style="list-style-type: none"> • gallon-sized sealable bag • rice • paper cup • dry-erase marker • Problem Set 	<ul style="list-style-type: none"> • 1-kilogram benchmark bag of beans
B	5	<ul style="list-style-type: none"> • Develop estimation strategies by reasoning about the weight in kilograms of a series of familiar objects to establish mental benchmark measures. 	<ul style="list-style-type: none"> • Personal white board • Metric spring scale • 1 kg, 100 g, 10 g, and 1 g weights (or pre-measured and labeled bags of rice corresponding to each measurement) • spring scale that measures up to 2,000 grams • metric digital scale 	<ul style="list-style-type: none"> • Digital scale in grams
B	6	<ul style="list-style-type: none"> • Solve one-step word problems involving metric weights within 100 and estimate to reason about solutions. 	<ul style="list-style-type: none"> • Spring scales that measure grams • personal white board • 1-kg bag of rice • beans (baggie weighing 28 g per pair) • popcorn kernels (baggie weighing 36 g per pair) 	<ul style="list-style-type: none"> • Spring scale • digital scale
B	7	<ul style="list-style-type: none"> • Decompose a liter to reason about the size of 1 liter, 100 milliliters, 10 milliliters, and 1 milliliter 	<ul style="list-style-type: none"> • Personal white board • Problem Set 	<ul style="list-style-type: none"> • Beaker • 2-liter bottle (empty, top cut off, without label) • ten-frame • 12 clear plastic cups (labeled A–L) • dropper

				<ul style="list-style-type: none"> one each of the following sizes of containers (labeled 1, 2, 3, and 4, respectively): <ul style="list-style-type: none"> cup pint quart gallon
B	8	<ul style="list-style-type: none"> Estimate and measure liquid volume in liters and milliliters using the vertical number line. 	<ul style="list-style-type: none"> Personal white board Pitcher of water (1 per group) empty 2-liter bottle with top cut off (1 per group) 1 plastic cup pre-measured and labeled at 100 mL, 1 permanent marker Problem Set 	<ul style="list-style-type: none"> 1-liter beaker
B	9	<ul style="list-style-type: none"> Solve mixed word problems involving all four operations with grams, kilograms, liters, and milliliters given in the same units. 	<ul style="list-style-type: none"> Personal white board Spring scales digital scales beakers (mL) 	<ul style="list-style-type: none"> Place value cards Beaker images Scale
C	10	<ul style="list-style-type: none"> Name numbers up to 100,000 by building understanding of the place value chart and placement of commas for naming base thousand units 	<ul style="list-style-type: none"> Personal white board unlabeled hundred thousands place value chart (Template) 	<ul style="list-style-type: none"> Analog clock for demonstration Place value disks: Ones, tens, hundreds, thousands, ten thousands, hundred thousands; unlabeled hundred thousands place value chart (Lesson Template)

C	11	<ul style="list-style-type: none"> Read and write numbers to 100,000 using base ten numerals, number names, expanded form, and expanded notation. 	<ul style="list-style-type: none"> Personal white board unlabeled hundred thousands place value chart (Lesson 10 Template) 	<ul style="list-style-type: none"> Analog clock for demonstration
C	12	<ul style="list-style-type: none"> Compare numbers based on the meaning of the digits using $<$, $>$, or $=$ to record the comparison. 	<ul style="list-style-type: none"> Personal white board unlabeled hundred thousands place value chart (Lesson Template) 	
Mid-Module Assessment				
D	13	<ul style="list-style-type: none"> Round two-digit measurements to the nearest ten on the vertical number line. 	<ul style="list-style-type: none"> Personal white board Problem Set 4 bags of rice (pre-measured at four different weights within 100 g) 4 containers of water (pre-measured with four different liquid volumes within 100 mL) ruler meter stick blank paper new pencil digital scale measuring grams 100 mL beaker demonstration clock classroom wall clock 	<ul style="list-style-type: none"> 100 mL beaker, water
D	14	<ul style="list-style-type: none"> Round two- and three-digit numbers to the 	<ul style="list-style-type: none"> Personal white board 	<ul style="list-style-type: none"> Place value cards

		nearest ten on the vertical number line.		
D	15	<ul style="list-style-type: none"> Round to the nearest hundred on the vertical number line. 	<ul style="list-style-type: none"> Find the Halfway Point Sprint Unlabeled place value chart (Template) place value disks (13 hundreds, 10 tens, 8 ones) Personal white board 	<ul style="list-style-type: none"> Place value cards
D	16	<ul style="list-style-type: none"> Round four- and five-digit numbers using the vertical number line. 	<ul style="list-style-type: none"> Personal white board 	<ul style="list-style-type: none"> Place value cards
E	17	<ul style="list-style-type: none"> Add measurements using the standard algorithm to compose larger units once. 	<ul style="list-style-type: none"> Personal white board Unlabeled place value chart (Lesson 15 Template) place value disks personal white board 	<ul style="list-style-type: none"> 2 beakers, water
E	18	<ul style="list-style-type: none"> Add measurements using the standard algorithm to compose larger units twice. 	<ul style="list-style-type: none"> Personal white board unlabeled place value chart (Lesson 15 Template) place value disks Problem Set 	<ul style="list-style-type: none"> Bag A of beans (266 grams) Bag B of beans (158 grams) scale that weighs in grams
E	19	<ul style="list-style-type: none"> Estimate sums by rounding and apply to solve measurement word problems. 	<ul style="list-style-type: none"> Round to the Nearest Ten Sprint Personal white board 	

F	20	<ul style="list-style-type: none"> Decompose once to subtract measurements including three digit minuends with zeros in the tens or ones place. 	<ul style="list-style-type: none"> Personal white board unlabeled place value chart (Lesson 15 Template) 	<ul style="list-style-type: none"> Unlabeled place value chart (Lesson 15 Template)
F	21	<ul style="list-style-type: none"> Decompose twice to subtract measurements including three digit minuends with zeros in the tens and ones places. 	<ul style="list-style-type: none"> Personal white board 	
F	22	<ul style="list-style-type: none"> Estimate differences by rounding and apply to solve measurement word problems. 	<ul style="list-style-type: none"> Round to the Nearest Hundred Sprint Personal white board 	
F	23	<ul style="list-style-type: none"> Estimate sums and differences of measurements by rounding, and then solve mixed word problems. 	<ul style="list-style-type: none"> Personal white board Materials Description (per group): <ul style="list-style-type: none"> Problem 1: <ul style="list-style-type: none"> digital scale 1 bag of rice pre-measured at 58 grams 1 bag of beans pre-measured at 91 grams Problem 2: <ul style="list-style-type: none"> 1 meter stick 	

			<ul style="list-style-type: none"> ▪ 3 pieces of yarn labeled A, B, and C (Yarn A pre-measured at 64 cm, Yarn B pre-measured at 88 cm, Yarn C pre-measured at 38 cm) ○ Problem 3 <ul style="list-style-type: none"> ▪ 1 400 mL beaker ▪ Container D with liquid pre-measured at 212 mL ▪ Container E with liquid pre-measured at 238 mL ▪ Container F with liquid pre-measured at 195 mL • ○ Problem 4 <ul style="list-style-type: none"> ▪ No additional materials 	
End-of-Module Assessment				

MODULE 3

Topic	Lesson #	Objective	Student Materials	Teacher Materials
A	1	<ul style="list-style-type: none"> • Use multiplication to compare. 	<ul style="list-style-type: none"> • Strips of blue paper • approximately 1 inch × 4 inches 	<ul style="list-style-type: none"> • Strips of blue paper • approximately 1 inch × 4 inches

			<ul style="list-style-type: none"> strips of red paper and strips of yellow paper the same size as the blue paper strips personal white board 	<ul style="list-style-type: none"> strips of red paper and strips of yellow paper the same size as the blue paper strips personal white board
A	2	<ul style="list-style-type: none"> Use multiplication to compare. 	<ul style="list-style-type: none"> Strips of blue paper approximately 1 inch \times 4 inches strips of red paper and strips of yellow paper the same size as the blue paper strips personal white board 	<ul style="list-style-type: none"> Strips of blue paper approximately 1 inch \times 4 inches strips of red paper and strips of yellow paper the same size as the blue paper strips personal white board
A	3	<ul style="list-style-type: none"> Use tables to record multiplicative relationships. 	<ul style="list-style-type: none"> Personal white board strips of paper (if needed) 	<ul style="list-style-type: none"> Personal white board strips of paper (if needed)
A	4	<ul style="list-style-type: none"> Solve multiplicative comparison word problems. 	<ul style="list-style-type: none"> Personal white board Problem Set 	<ul style="list-style-type: none"> Personal white board Problem Set
B	5	<ul style="list-style-type: none"> Study commutativity to find known facts of 6, 7, 8, and 9. 	<ul style="list-style-type: none"> Mixed Multiplication Sprint Personal white board Problem Set 	
B	6	<ul style="list-style-type: none"> Apply the distributive and commutative properties to relate multiplication facts $5 \times n + n$ to $6 \times n$ and $n \times 6$ 	<ul style="list-style-type: none"> Use the Commutative Property to Multiply Sprint Personal white board 	

		where n is the size of the unit.		
B	7	<ul style="list-style-type: none"> Multiply and divide with familiar facts using a box to represent the unknown. 	<ul style="list-style-type: none"> Multiply by 5 (6–10) Pattern Sheet Personal white board 	
C	8	<ul style="list-style-type: none"> Count by units of 6 to multiply and divide using number bonds to decompose. 	<ul style="list-style-type: none"> Personal white board Set of playing cards numbered 1–9 	
C	9	<ul style="list-style-type: none"> Count by units of 7 to multiply and divide using number bonds to decompose. 	<ul style="list-style-type: none"> Multiply by 6 (1–5) (Pattern Sheet) Set of playing cards numbered 1–6 Personal white board 	
C	10	<ul style="list-style-type: none"> Interpret the unknown in multiplication and division to model and solve problems using units of 6 and 7. 	<ul style="list-style-type: none"> Multiply by 6 (6–10) (Pattern Sheet) Personal white board Problem Set (Page 2) 	
D	11	<ul style="list-style-type: none"> Understand the function of parentheses and apply to solving problems. 	<ul style="list-style-type: none"> Multiply by 7 (1–5) (Pattern Sheet) Personal white board 	
D	12	<ul style="list-style-type: none"> Model the associative property as a strategy to multiply. 	<ul style="list-style-type: none"> Multiply by 7 (6–10) (Pattern Sheet) Personal white board 	

			<ul style="list-style-type: none"> • Application Problems Sheet 	
Mid-Module Assessment				
E	13	<ul style="list-style-type: none"> • Apply the distributive property and the fact $9 = 10 - 1$ as a strategy to multiply. 	<ul style="list-style-type: none"> • Multiply by 8 (1–5) (Pattern Sheet) • Personal white board • strip diagram (Template) 	
E	14	<ul style="list-style-type: none"> • Interpret the unknown in multiplication and division to model and solve problems. 	<ul style="list-style-type: none"> • Multiply by 8 (6–10) (Pattern Sheet) • Personal white board 	
F	15	<ul style="list-style-type: none"> • Use the distributive property as a strategy to find Reason about and explain arithmetic patterns using units of 0 and 1 as they relate to multiplication and division.d related multiplication facts. 	<ul style="list-style-type: none"> • Multiply or Divide by 8 Sprint • Personal white board 	
F	16	<ul style="list-style-type: none"> • Identify patterns in multiplication and division facts using the multiplication table. 	<ul style="list-style-type: none"> • Personal white board • Problem Set • orange crayon 	
F	17	<ul style="list-style-type: none"> • Solve two-step word problems involving all four operations and 	<ul style="list-style-type: none"> • Multiply and divide with 1 and 0 Sprint • Personal white board 	

		assess the reasonableness of solutions.		
G	18	<ul style="list-style-type: none"> • Multiply by multiples of 10 using the place value chart. 	<ul style="list-style-type: none"> • Personal white board • Place value disks 	<ul style="list-style-type: none"> • Place value disks
G	19	<ul style="list-style-type: none"> • Use place value strategies and the associative property $n \times (m \times 10) = (n \times m) \times 10$ (where n and m are less than 10) to multiply by multiples of 10. 	<ul style="list-style-type: none"> • Multiply by 9 (1–5) (Pattern Sheet) • Personal white board 	
G	20	<ul style="list-style-type: none"> • Use concrete models to represent two-digit by one-digit multiplication. 	<ul style="list-style-type: none"> • Multiply by Multiples of 10 Sprint • Place value disks ones, tens and hundreds • Place value chart to hundreds (Template) • Personal white board Place value disks: ones and tens 	<ul style="list-style-type: none"> • Place value disks: Ones and tens • Place value chart (Template)
G	21	<ul style="list-style-type: none"> • Draw models to represent two-digit by one-digit multiplication. 	<ul style="list-style-type: none"> • Multiply by 9 (6–10) (Pattern Sheet) • Personal white board • hundreds place value chart (Template) 	<ul style="list-style-type: none"> • Hundreds place value chart (Template)

G	22	<ul style="list-style-type: none"> Multiply two-digit numbers by one-digit numbers using the standard algorithm. 	<ul style="list-style-type: none"> Multiply or Divide by 9 Sprint Personal white board hundreds place value chart (Template) 	<ul style="list-style-type: none"> Hundreds place value chart (Template)
G	23	<ul style="list-style-type: none"> Solve two-step word problems involving multiplying single-digit factors by multiples of 10 and two-digit factors. 	<ul style="list-style-type: none"> Personal white board 	<ul style="list-style-type: none"> Stopwatch multiples of 10 multiplication cards (Template)
End-of-Module Assessment				

MODULE 4

Topic	Lesson #	Objective	Student Materials	Teacher Materials
A	1	<ul style="list-style-type: none"> Relate side lengths to the number of tiles on a side. 	<ul style="list-style-type: none"> Personal white board 15 square inch and square centimeter tiles ruler 	<ul style="list-style-type: none"> 12 square tiles
A	2	<ul style="list-style-type: none"> Form rectangles by tiling with unit squares to make arrays. 	<ul style="list-style-type: none"> Personal white board Blank paper 15 square inch tiles straight edge 	
A	3	<ul style="list-style-type: none"> Draw rows and columns to determine the area of a rectangle given an incomplete array 	<ul style="list-style-type: none"> Personal white board straight edge Problem Set array 1 (Template 1) array 2 (Template 2) 	

A	4	<ul style="list-style-type: none"> Interpret area models to form rectangular arrays 	<ul style="list-style-type: none"> Grid paper 1 set of square centimeter and square inch tiles per pair personal white board ruler area model (Template) 	<ul style="list-style-type: none"> Meter stick 12-inch ruler pad of square sticky notes
A	5	<ul style="list-style-type: none"> Find the area of a rectangle through multiplication of the side lengths. 	<ul style="list-style-type: none"> Multiply by 6 (6–10) Pattern Sheet Personal white board inch ruler grid (Template) 	
Mid-Module Assessment				
B	6	<ul style="list-style-type: none"> Analyze different rectangles and reason about their area. 	<ul style="list-style-type: none"> Personal white board Small centimeter grid (Template) Problem Set 	
B	7	<ul style="list-style-type: none"> Apply the distributive property as a strategy to find the total area of a larger rectangle by adding two products. 	<ul style="list-style-type: none"> Personal white board square centimeter tiles tiling (Template) 	
B	8	<ul style="list-style-type: none"> Demonstrate the possible whole number side lengths of rectangles with areas of 24, 36, 48, or 72 square units using the associative property 	<ul style="list-style-type: none"> Personal white board 	

C	9	<ul style="list-style-type: none"> Solve word problems involving area. 	<ul style="list-style-type: none"> Multiply by 7 (6–10) Pattern Sheet Personal white board 	
C	10	<ul style="list-style-type: none"> Find areas by decomposing into rectangles or completing composite figures to form rectangles. 	<ul style="list-style-type: none"> Blank paper Personal white board large grid (Template) 	
C	11	<ul style="list-style-type: none"> Find areas by decomposing into rectangles or completing composite figures to form rectangles. 	<ul style="list-style-type: none"> Multiply by 8 (6–10) Pattern Sheet Personal white board Problem Set 	
C	12	<ul style="list-style-type: none"> Apply knowledge of area to determine areas of rooms in a given floor plan 	<ul style="list-style-type: none"> Multiply by 9 (1–5) Pattern Sheet Personal white board Problem Set ruler 	(T) Chart paper labeled Strategies We Can Use to Find Area
C	13	<ul style="list-style-type: none"> Apply knowledge of area to determine areas of rooms in a given floor plan 	<ul style="list-style-type: none"> Multiply by 9 (6–10) Pattern Sheet Personal white board Lesson 12 Problem Set ruler Centimeter grid construction paper glue Lesson 13 Problem Set 	

End-of-Module Assessment

MODULE 5

Topic	Lesson #	Objective	Student Materials	Teacher Materials
A	1	<ul style="list-style-type: none"> Specify and partition a whole into equal parts, identifying and counting unit fractions using concrete models 	<ul style="list-style-type: none"> Personal white board paper or math book (optional) 2—12" × 1" strips of construction paper 12-inch ruler 	<ul style="list-style-type: none"> 1—clear plastic cup full of colored water 2—other identical clear plastic cups (empty) 2—12" × 1" strips of construction paper
A	2	<ul style="list-style-type: none"> Specify and partition a whole into equal parts, identifying and counting unit fractions by folding fraction strips. 	<ul style="list-style-type: none"> Personal white board 8 paper strips sized 4 1/4" × 1" (vertically cut an 8 1/2" × 11" paper down the middle) pencil crayon 	
A	3	<ul style="list-style-type: none"> Specify and partition a whole into equal parts, identifying and counting unit fractions by drawing pictorial area models. 	<ul style="list-style-type: none"> Multiply with Six Sprint Personal white board 	<ul style="list-style-type: none"> Rectangular- and circular-shaped papers
A	4	<ul style="list-style-type: none"> Represent and identify fractional parts of different wholes 	<ul style="list-style-type: none"> Multiply and Divide by Six Sprint Problem Set see additional items for stations listed below 	

A	5	<ul style="list-style-type: none"> Recognize that equal parts of an identical rectangle can have different shapes. 	<ul style="list-style-type: none"> Personal white board Geoboard and 4 rubber bands 2 construction paper squares per pair in two different colors 2 construction paper rectangles per pair in 2 different colors shaded half circle (Template) 	<ul style="list-style-type: none"> 2 equally sized construction paper squares
B	6	<ul style="list-style-type: none"> Partition a whole into equal parts and define the equal parts to identify the unit fraction numerically. 	<ul style="list-style-type: none"> Personal white board 	
B	7	<ul style="list-style-type: none"> Build non-unit fractions less than one whole from unit fractions. 	<ul style="list-style-type: none"> Multiply with Seven Sprint Personal white board 	
B	8	<ul style="list-style-type: none"> Identify and represent shaded and non-shaded parts of one whole as fractions. 	<ul style="list-style-type: none"> Personal white board Multiply and Divide by Seven Sprint Paper scissors crayons math journal 	<ul style="list-style-type: none"> Clock 1-liter beaker water
B	9	<ul style="list-style-type: none"> Represent parts of one whole as fractions with number bonds. 	<ul style="list-style-type: none"> Personal white board Identify Fractions Sprint Sprint B from the Fluency Practice 	

B	10	<ul style="list-style-type: none"> Build and write fractions greater than one whole using unit fractions. 	<ul style="list-style-type: none"> Multiply with Eight Sprint Personal white board fraction strips 	<ul style="list-style-type: none"> Clock
C	11	<ul style="list-style-type: none"> Compare unit fractions by reasoning about their size using fraction strips. 	<ul style="list-style-type: none"> Multiply and Divide by Eight Sprint Folded fraction strips (halves, thirds, fourths, sixths, and eighths) from Lesson 10 personal white board 1 set of = cards per pair 	<ul style="list-style-type: none"> Clock
C	12	<ul style="list-style-type: none"> Compare unit fractions with different-sized models representing the whole. 	<ul style="list-style-type: none"> Personal white board 	<ul style="list-style-type: none"> Clock 2 different-sized clear plastic cups food coloring water
C	13	<ul style="list-style-type: none"> Specify the corresponding whole when presented with one equal part. 	<ul style="list-style-type: none"> Multiply with Nine Sprint Personal white board Use similar materials to those used in Lesson 4 (at least 75 copies of each) 10-centimeter length of yarn 4" × 1" rectangular piece of yellow construction paper 3" × 1" brown paper 1" × 1" orange square water small plastic cups clay 	<ul style="list-style-type: none"> 2 different-sized clear plastic cups food coloring water

C	14	<ul style="list-style-type: none"> Specify the corresponding whole when presented with one equal part. 	<ul style="list-style-type: none"> Personal white board 1 index card (or per pair) black marker fraction strips 	<ul style="list-style-type: none"> Clock
Mid-Module Assessment				
D	15	<ul style="list-style-type: none"> Place fractions on a number line with endpoints 0 and 1. 	<ul style="list-style-type: none"> Personal white board or paper Fraction strips blank paper ruler 	<ul style="list-style-type: none"> Timer Board space yardstick large fraction strip for modeling
D	16	<ul style="list-style-type: none"> Place any fraction on a number line with endpoints 0 and 1. 	<ul style="list-style-type: none"> Personal white board 	
D	17	<ul style="list-style-type: none"> Place whole number fractions and fractions between whole numbers on the number line 	<ul style="list-style-type: none"> Multiply and Divide by Nine Sprint Personal white board 	
D	18	<ul style="list-style-type: none"> Practice placing various fractions on the number line 	<ul style="list-style-type: none"> Division Sprint Personal white board 	
D	19	<ul style="list-style-type: none"> Compare fractions and whole numbers on the number line by reasoning about their distance from 0. 	<ul style="list-style-type: none"> Personal white board Work from Application Problem 	<ul style="list-style-type: none"> Large-scale number line partitioned into thirds 4 containers 4 beanbags (or balled-up pieces of paper) sticky notes

D	20	<ul style="list-style-type: none"> Understand distance and position on the number line as strategies for comparing fractions. (Optional) 	<ul style="list-style-type: none"> Express Fractions as Whole Numbers Sprint Personal white board 	
E	21	<ul style="list-style-type: none"> Recognize and show that equivalent fractions have the same size, though not necessarily the same shape. 	<ul style="list-style-type: none"> Multiply by 7 (1–5) Pattern Sheet Thirds (Template) red crayon scissors glue stick blank paper 	<ul style="list-style-type: none"> Linking cubes in 2 colors
E	22	<ul style="list-style-type: none"> Recognize and show that equivalent fractions refer to the same point on the number line. 	<ul style="list-style-type: none"> Blank paper Personal white board 4 1 4 -inch \times 1-inch fraction strips (5 per student) math journal crayons glue 	
E	23	<ul style="list-style-type: none"> Generate simple equivalent fractions by using visual fraction models and the number line. 	<ul style="list-style-type: none"> Blank paper Personal white board Math journal or fraction strips made in Lesson 22 new 4 1 4 -inch \times 1-inch fraction strips (3 per student) crayons glue 	

E	24	<ul style="list-style-type: none"> • Generate simple equivalent fractions by using visual fraction models and the number line. 	<ul style="list-style-type: none"> • Add by Six Sprint • Personal white board • Index card (1 per pair, described below) • sentence strip (1 per pair) • chart paper (1 per group) • markers • glue • math journal 	<ul style="list-style-type: none"> • Prepared fraction images
E	25	<ul style="list-style-type: none"> • Express whole numbers as fractions and recognize equivalence with different units. 	<ul style="list-style-type: none"> • Add by Seven Sprint • Personal white board • Fraction pieces (Template) • scissors • envelope • sentence strip • crayons 	
E	26	<ul style="list-style-type: none"> • Express whole number fractions on the number line when the unit interval is 1. 	<ul style="list-style-type: none"> • Subtract by Six Sprint • Personal white board • 3 wholes (Template 1) • 6 wholes (Template 2) 	
E	27	<ul style="list-style-type: none"> • Decompose whole number fractions greater than 1 using whole number equivalence with various models. 	<ul style="list-style-type: none"> • Add by Eight Sprint • Personal white board 	
E	28	<ul style="list-style-type: none"> • Explain equivalence by manipulating units and 	<ul style="list-style-type: none"> • Subtract by Seven Sprint • Personal white board 	

		reasoning about their size.	<ul style="list-style-type: none"> • 3 wholes (Lesson 26 Template 1) • fraction strips (3 per student) • math journal 	
F	29	<ul style="list-style-type: none"> • Compare fractions with the same numerator pictorially 	<ul style="list-style-type: none"> • Subtract by Eight Sprint • Personal white board • Work from Application Problem 	
F	30	<ul style="list-style-type: none"> • Compare fractions with the same numerator using $<$, $>$, or $=$, and use a model to reason about their size. 	<ul style="list-style-type: none"> • Multiply by 8 (5–9) Pattern Sheet • Personal white board • 3 wholes (Lesson 26 Template 1) 	
F	31	<ul style="list-style-type: none"> • Partition various wholes precisely into equal parts using a number line method. 	<ul style="list-style-type: none"> • Multiply by 9 (1–5) Pattern Sheet • Personal white board • 9-inch \times 1-inch strips of red construction paper (at least 5 per student) • lined paper (Template) or wide-ruled notebook paper (several pieces per student) • 12-inch ruler 	
End-of-Module Assessment				

MODULE 6

Topic	Lesson #	Objective	Student Materials	Teacher Materials
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A	1	<ul style="list-style-type: none"> Explore the relationship between human capital and income by generating income data for various professions. 	<ul style="list-style-type: none"> Personal white board Problem Set 	<ul style="list-style-type: none"> Real or plastic U.S. bills and coins
A	2	<ul style="list-style-type: none"> Explore relationships between availability of resources and cost. 	<ul style="list-style-type: none"> Personal white board Application Problem Template Problem Set 	<ul style="list-style-type: none"> Real or plastic U.S. bills and coins
A	3	<ul style="list-style-type: none"> Recognize the benefits of saving 	<ul style="list-style-type: none"> Personal white board Application Problem Template Problem Set 	<ul style="list-style-type: none"> Real or plastic U.S. bills and coins
A	4	<ul style="list-style-type: none"> Understand credit and the role of borrower and lender 	<ul style="list-style-type: none"> Personal white board 	
B	5	<ul style="list-style-type: none"> Generate and organize data. 	<ul style="list-style-type: none"> Personal white board Problem Set class list (preferably in alphabetical order) 	
B	6	<ul style="list-style-type: none"> Rotate strip diagrams vertically 	<ul style="list-style-type: none"> Personal white board Strip diagrams from Application Problem 	
B	7	<ul style="list-style-type: none"> Create scaled bar graphs 	<ul style="list-style-type: none"> Personal white board Multiply or Divide by 6 Sprint Graph A (Template 1) 	<ul style="list-style-type: none"> Real or plastic U.S. bills and coins

			<ul style="list-style-type: none"> Graph B (Template 2) colored pencils straightedge 	
B	8	<ul style="list-style-type: none"> Solve one- and two-step problems involving graphs. 	<ul style="list-style-type: none"> Personal white board Graph (Template) 	<ul style="list-style-type: none"> Dot plot (Fluency Template 1) Bar graph (Fluency Template 2)
C	9	<ul style="list-style-type: none"> Create a ruler with 1-inch, 1 2 -inch, and 1 4 -inch intervals, and generate measurement data. 	<ul style="list-style-type: none"> Personal white board 1" × 6" strip of yellow construction paper colored pencils or markers (black, red, and blue) ruler lined paper (Template) 1 straw pre-cut (vary 1", 1 2 ", and 1 4 " lengths among students) Problem Set 	<ul style="list-style-type: none"> Real or plastic U.S. bills and coins
C	10	<ul style="list-style-type: none"> Explore customary weight units and generate measurement data. 	<ul style="list-style-type: none"> Personal white board Problem Set 	<ul style="list-style-type: none"> Different types of scales such as balance, platform, spring, digital, beam (If actual scales are not available, use pictures.) Templates 1-3 Various objects weighing about 1 pound (For example, 1 lb rice, 1 lb pasta, 1 pint of liquid, a football, 3 D-cell batteries taped together) can of soda large can of soup

				<ul style="list-style-type: none"> • various items weighing about 1 ounce (10 pennies taped together, a new pencil, 1 AA battery, 28 small paper clips taped together)
C	11	<ul style="list-style-type: none"> • Explore customary capacity units and generate measurement data. 	<ul style="list-style-type: none"> • Personal white board • Problem Set • 1 set of labeled measuring cups (1 fluid ounce, 1 cup, 1 pint, 1 quart, 1 gallon) (1 set per 3 students) • 1 gallon of water (per 3 students) • Problem Set • Several containers of varying capacity • Several samples of water to measure 	<ul style="list-style-type: none"> • Real or plastic U.S. bills and coins • Prepared measurement units table, 1 fluid ounce container, 1 clear container, 1 fluid ounce of water, 1 fluid ounce of oil • Chart paper
C	12	<ul style="list-style-type: none"> • Interpret measurement data from various dot plots. 	<ul style="list-style-type: none"> • Multiply by 6 (1–5) (Pattern Sheet) • Personal white board • blank paper • markers • Time Spent Outside dot plot (Template) 	<ul style="list-style-type: none"> • Number of Miles bar graph (Fluency Template) • Time Spent Outside dot plot (Template)
C	13	<ul style="list-style-type: none"> • Represent measurement data with dot plots. 	<ul style="list-style-type: none"> • Multiply by 6 (6–10) (Pattern Sheet) 	

			<ul style="list-style-type: none"> • Student-made ruler from Lesson 9 • Straw Lengths (Template) 	
C	14	<ul style="list-style-type: none"> • Represent measurement data with dot plots. 	<ul style="list-style-type: none"> • Personal white board • Multiply by 7 (1–5) (Pattern Sheet) • Heights of Sunflower Plants chart (Template) • straightedge 	<ul style="list-style-type: none"> • Real or plastic U.S. bills and coins
C	15	<ul style="list-style-type: none"> • Analyze data to problem solve. 	<ul style="list-style-type: none"> • Personal white board • Bar graph and dot plot (Template) 	
End of Module Assessment				

MODULE 7

Topic	Lesson #	Objective	Student Materials	Teacher Materials
A	1	Solve word problems in varied contexts.	Multiply by 3 (1–5) (Pattern Sheet) Problem Set personal white board	
A	2	Solve word problems in varied contexts.	Multiply by 3 (6–10) Pattern Sheet Problem Set 1 piece of chart paper per pair or triad 1 different color marker per student in each group	
A	3	Share and critique peer solution strategies to varied word problems.	Multiply by 4 (1–5) Pattern Sheet Problem Set personal white board	Student work samples (Template)

B	4	Compare and classify quadrilaterals.	Multiply by 4 (6–10) Pattern Sheet Index card for use as right angle tool polygons (A–L) (Template) ruler Problem Set scissors	2 rulers
B	5	Compare and classify other polygons.	Multiply by 5 (1–5) Pattern Sheet Personal white board Right angle tool Polygons M–X (Template) ruler Problem Set scissors	
B	6	Draw polygons with specified attributes to solve problems.	Multiply by 5 (6–10) Pattern Sheet Personal white board ruler right angle tool math journal polygon (Template 1) (1 per pair) game cards (Template 2) (1 set per pair, cut out)	Game cards (Template 2)
B	7	Classify and sort three-dimensional figures according to their attributes.	Multiply by 6 (1–5) Pattern Sheet Personal white board Set of geometric solids (cone, cube, cylinder, rectangular prism, sphere, and triangular prism) or a constructed set of solids from the lesson templates	
B	8	Classify and sort three-dimensional figures according to their attributes.	Multiply by 6 (6–10) Pattern Sheet Personal white board with grid paper Set of geometric solids (cone, cube, cylinder, rectangular prism, sphere,	

			and triangular prism) or a constructed set of solids from the Lesson 7 templates, index cards, Problem Set	
C	9	Decompose quadrilaterals to understand perimeter as the boundary of a shape.	Multiply by 7 (1–5) Pattern Sheet 2" square on cardstock tape crayons Problem Set scissors black marker red marker white string	2" square on cardstock, scissors, tape
C	10	Tessellate to understand perimeter as the boundary of a shape. (Optional)	Shape created in Lesson 9 blank piece of paper crayons white string black marker Problem Set	Shape created in Lesson 9
C	11	Measure side lengths in whole number units to determine the perimeter of polygons.	Multiply by 7 (6–10) Pattern Sheet Grid paper Personal white board shapes (Template) ruler	
C	12	Explore perimeter as an attribute of plane figures and solve problems.	Multiply by 8 (1–5) Pattern Sheet Personal white board 3" × 5" index card ruler Quiz-Quiz-Trade cards (Template)	Timer
C	13	Determine the perimeter of regular polygons and rectangles	Multiply by 8 (6–10) Pattern Sheet	

		when whole number measurements are unknown.	Personal white board	
C	14	Solve word problems to determine perimeter with given side lengths.	Multiply by 9 (1–5) Pattern Sheet Personal white board Problem Set	
C	15	Use string to measure the perimeter of various circles to the nearest quarter inch.	Multiply by 9 (6–10) Pattern Sheet Personal white board White string (per pair) ruler black marker circle (Template) (one circle per pair, copied on cardstock) Problem Set markers variety of circular objects (e.g., paper plates, lids, Frisbee, CDs, pie pans, cups, rolls of masking tape)	Circles (Template) (copied on cardstock) white string black marker ruler
C	16	Use all four operations to solve problems involving perimeter and unknown measurements.	Personal white board	
Mid-Module Assessment				
D	17	Construct rectangles from a given number of unit squares and determine the perimeters.	Personal white board Grid paper 18 unit square tiles (per pair of students)	
D	18	Construct rectangles from a given number of unit squares and determine the perimeters.	Multiply or Divide by 2 Sprint Grid paper Personal white board Problem Set	

			unit square tiles	
D	19	Construct rectangles with a given perimeter using unit squares and determine their areas.	Multiply or Divide by 3 Sprint Problem Set personal white board square unit tiles	
D	20	Construct rectangles with a given perimeter using unit squares and determine their areas.	Multiply or Divide by 4 Sprint Centimeter grid paper (Template) Problem Set personal white board	
D	21	Use a dot plot to record the number of rectangles constructed in Lessons 19 and 20.	Multiply or Divide by 5 Sprint Personal white board Problem Set ruler data chart from Lessons 19–20 dot plot from Lesson 18 scissors 11-inch piece of string (per pair) rectangles (Template 2) (per pair)	Dot plot (Template 1)
E	22	Solve a variety of word problems with perimeter.	Multiply or Divide by 6 Sprint Problem Set	
E	23	Solve a variety of word problems involving area and perimeter using all four operations.	Multiply or Divide by 7 Sprint Personal white board Problem Set	
E	24	Solve a variety of word problems involving area and perimeter using all four operations.	Multiply or Divide by 8 Sprint Personal white board Problem Set	

End of Module Assessment

F	25	Explore and create unconventional representations of one-half.	Multiply or Divide by 9 Sprint Personal white board Squares (Template) ruler crayons Problem Set	
F	26	Explore and create unconventional representations of one-half.	Mixed Multiplication Sprint Personal white board Circles with dots (Template) ruler crayons scissors Problem Set	Completed page 1 sample of Problem Set (analyzing tool)
F	27	Solidify fluency with Grade 3 skills.	Mixed Division Sprint Personal white board Fluency game materials (listed with each activity and included at the end of the lesson) Problem Set	
F	28	Create resource booklets to support fluency with Grade 3 skills.	Multiply and Divide Sprint	