

MODULE 1

Topic	Lesson #	Objective	Student Materials	Teacher Materials
A	1	<ul style="list-style-type: none"> <li>Use place value patterns to understand the thousandths place.</li> </ul>	<ul style="list-style-type: none"> <li>Multiply by 10 Sprint</li> <li>Personal white board</li> <li>unlabeled hundreds through thousandths place value chart (Fluency Template)</li> <li>Place value disks</li> <li>millions through thousandths place value chart (Template)</li> </ul>	
A	2	<ul style="list-style-type: none"> <li>Use place value understanding to reason abstractly about values of digits in decimal fractions.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Millions through thousandths place value chart (Lesson 1 Template)</li> </ul>	<ul style="list-style-type: none"> <li>Millions through thousandth place value chart (Lesson 1 Template)</li> <li>millions through thousandths place value chart (Lesson 1 Template)</li> </ul>
A	3	<ul style="list-style-type: none"> <li>Use place value understanding to convert metric units.</li> </ul>	<ul style="list-style-type: none"> <li>Millions through thousandths place value chart (Lesson 1 template)</li> <li>personal white board</li> <li>Meter strip (Template) or meter stick</li> </ul>	
B	4	<ul style="list-style-type: none"> <li>Name decimal fractions in expanded notation, unit form, and word form by applying place value reasoning.</li> </ul>	<ul style="list-style-type: none"> <li>Multiply Decimals by 10, 100, and 1,000 Sprint</li> <li>Millions to thousandths place value chart (Lesson 1 Template)</li> <li>personal white board</li> </ul>	

			<ul style="list-style-type: none"> <li>thousands through thousandths place value chart (Template)</li> </ul>	
B	5	<ul style="list-style-type: none"> <li>Compare decimal fractions to the thousandths using like units, and express comparisons with <math>&gt;</math>, <math>&lt;</math>, <math>=</math>.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>millions through thousandths place value chart (Lesson 1 Template)</li> </ul>	
C	6	<ul style="list-style-type: none"> <li>Round a given decimal to any place using place value understanding and the vertical number line.</li> </ul>	<ul style="list-style-type: none"> <li>Find the Midpoint Sprint</li> <li>Personal white board</li> <li>hundreds to thousandths place value chart (Template)</li> </ul>	
C	7	<ul style="list-style-type: none"> <li>Round a given decimal to any place using place value understanding and the vertical number line.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>hundreds to thousandths place value chart (Lesson 6 Template)</li> </ul>	
Mid-Module Assessment: Topics A–C (assessment $\frac{1}{2}$ day, return $\frac{1}{2}$ day, remediation or further applications 1 day)				
D	8	<ul style="list-style-type: none"> <li>Add decimals using place value strategies, and relate those strategies to a written method.</li> </ul>	<ul style="list-style-type: none"> <li>Round to the Nearest One Sprint</li> <li>Personal white board</li> <li>Hundreds to thousandths place value chart (Lesson 6 Template)</li> </ul>	
D	9	<ul style="list-style-type: none"> <li>Subtract decimals using place value strategies,</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	

		and relate those strategies to a written method.	<ul style="list-style-type: none"> <li>• Hundreds to thousandths place value chart (Lesson 6 Template)</li> </ul>	
E	10	<ul style="list-style-type: none"> <li>• Multiply a decimal fraction by single-digit whole numbers, relate to a written method through application of the area model and place value understanding, and explain the reasoning used.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• Hundreds to thousandths place value chart (Lesson 6 Template)</li> </ul>	
E	11	<ul style="list-style-type: none"> <li>• Multiply a decimal fraction by single-digit whole numbers, including using estimation to confirm the placement of the decimal point.</li> </ul>	<ul style="list-style-type: none"> <li>• Add Decimals Sprint</li> <li>• Personal white board</li> </ul>	
F	12	<ul style="list-style-type: none"> <li>• Divide decimals by single-digit whole numbers involving easily identifiable multiples using place value understanding and relate to a written method.</li> </ul>	<ul style="list-style-type: none"> <li>• Subtract Decimals Sprint</li> <li>• Personal white board</li> <li>• Hundreds to thousandths place value chart (Lesson 6 Template)</li> </ul>	

F	13	<ul style="list-style-type: none"> <li>• Divide decimals with a remainder using place value understanding and relate to a written method.</li> </ul>	<ul style="list-style-type: none"> <li>• Millions to thousandths place value chart (Lesson 1 Template)</li> <li>• personal white board</li> <li>• Hundreds to thousandths place value chart (Lesson 6 Template)</li> <li>• place value disks</li> </ul>	<ul style="list-style-type: none"> <li>• Millions to thousandths place value chart (Lesson 1 Template)</li> </ul>
F	14	<ul style="list-style-type: none"> <li>• Divide decimals using place value understanding, including remainders in the smallest unit.</li> </ul>	<ul style="list-style-type: none"> <li>• Millions to thousandths place value chart (Lesson 1 Template)</li> <li>• personal white board</li> <li>• Hundreds to thousandths place value chart (Lesson 6 Template)</li> </ul>	
F	15	<ul style="list-style-type: none"> <li>• Solve word problems using decimal operations.</li> </ul>	<ul style="list-style-type: none"> <li>• Hundreds through thousandths place value chart (Lesson 6 Template)</li> <li>• personal white board</li> <li>• Problem Set</li> </ul>	
End-of-Module Assessment: Topics A–F (assessment ½ day, return ½ day, remediation or further applications 1 day)				

## MODULE 2

Topic	Lesson #	Objective	Student Materials	Teacher Materials
A	1	<ul style="list-style-type: none"> <li>Find factor pairs for numbers to 100, and use understanding of factors to define prime and composite.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
A	2	<ul style="list-style-type: none"> <li>Use division and the associative property to test for factors and observe patterns.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
A	3	<ul style="list-style-type: none"> <li>Determine if a whole number is a multiple of another number.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>crayons</li> </ul>	
A	4	<ul style="list-style-type: none"> <li>Explore properties of prime and composite numbers to 100 by using multiples.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Problem Set</li> <li>orange crayon</li> <li>red crayon</li> </ul>	<ul style="list-style-type: none"> <li>Sieve (for the Student Debrief)</li> </ul>
B	5	<ul style="list-style-type: none"> <li>Multiply multi-digit whole numbers and multiples of 10 using place value patterns and the distributive and associative properties</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>millions to thousandths place value chart (Template)</li> </ul>	
B	6	<ul style="list-style-type: none"> <li>Estimate multi-digit products by rounding factors to a basic fact and</li> </ul>	<ul style="list-style-type: none"> <li>Multiply by 10, 100, and 1,000 Sprint</li> </ul>	

		using place value patterns.		
C	7	<ul style="list-style-type: none"> <li>Write and interpret numerical expressions, and compare expressions using a visual model.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
C	8	<ul style="list-style-type: none"> <li>Convert numerical expressions into unit form as a mental strategy for multi-digit multiplication.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
C	9	<ul style="list-style-type: none"> <li>Connect visual models and the distributive property to partial products of the standard algorithm without renaming.</li> </ul>	<ul style="list-style-type: none"> <li>Estimate Products Pattern Sheet</li> <li>Personal white board</li> </ul>	
C	10 & 11	<ul style="list-style-type: none"> <li>Connect area models and the distributive property to partial products of the standard algorithm with renaming.</li> </ul>	<ul style="list-style-type: none"> <li>Mental Multiplication Pattern Sheet</li> <li>Personal white board</li> <li>Multiply by Multiples of 10 and 100 Sprint</li> </ul>	
C	12	<ul style="list-style-type: none"> <li>Fluently multiply multi-digit whole numbers using the standard algorithm and using estimation to check for</li> </ul>		

		reasonableness of the product.		
C	13	<ul style="list-style-type: none"> <li>Fluently multiply multi-digit whole numbers using the standard algorithm to solve multi-step word problems.</li> </ul>	<ul style="list-style-type: none"> <li>Millions to thousandths place value chart (Lesson 5 Template)</li> <li>Personal white board</li> <li>Problem Set</li> </ul>	<ul style="list-style-type: none"> <li>Millions to thousandths place value chart (Lesson 5 Template)</li> <li>Problem Set</li> </ul>
D	14	<ul style="list-style-type: none"> <li>Multiply decimal fractions with tenths by multi-digit whole numbers using place value understanding to record partial products.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
D	15	<ul style="list-style-type: none"> <li>Multiply decimal fractions by multi-digit whole numbers through conversion to a whole number problem and reasoning about the placement of the decimal.</li> </ul>	<ul style="list-style-type: none"> <li>Multiply Decimals Sprint</li> <li>Personal white board</li> </ul>	
D	16	<ul style="list-style-type: none"> <li>Reason about the product of a whole number and a decimal with hundredths using place value understanding and estimation.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	

E	17	<ul style="list-style-type: none"> <li>Use whole number multiplication to express equivalent measurements.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Meter strip (Template); one string either 9 cm, 20 cm, 75 cm, or 105 cm</li> </ul>	
E	18	<ul style="list-style-type: none"> <li>Use decimal multiplication to express equivalent measurements.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>meter strip (Lesson 17 Template)</li> </ul>	
E	19	<ul style="list-style-type: none"> <li>Solve two-step word problems involving measurement conversions.</li> </ul>	<ul style="list-style-type: none"> <li>Convert Inches to Feet and Inches Sprint</li> <li>Problem Set</li> </ul>	<ul style="list-style-type: none"> <li>Problem Set</li> </ul>
Mid-Module Assessment: Topics A–E (assessment 1/2 day, return 1/2 day, remediation or further applications 2 days)				
F	20	<ul style="list-style-type: none"> <li>Use divide by 10 patterns for multi-digit whole number division.</li> </ul>	<ul style="list-style-type: none"> <li>Divide by Multiples of 10 and 100 Sprint</li> <li>Personal white board</li> </ul>	
F	21 & 22	<ul style="list-style-type: none"> <li>Use compatible numbers to approximate quotients with two-digit divisors.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
G	23	<ul style="list-style-type: none"> <li>Divide two- and three-digit dividends by multiples of 10 with single-digit quotients, and make connections to a written method.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	



G	24 & 25	<ul style="list-style-type: none"> <li>• Divide two- and three-digit dividends by two-digit divisors with single-digit quotients, and make connections to a written method.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> </ul>	
G	26 & 27	<ul style="list-style-type: none"> <li>• Divide three- and four-digit dividends by two-digit divisors resulting in two- and three-digit quotients, reasoning about the decomposition of successive remainders in each place value.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> </ul>	
H	28	<ul style="list-style-type: none"> <li>• Divide decimal dividends by multiples of 10, reasoning about the placement of the decimal point and making connections to a written method.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• Millions to thousandths place value chart (Lesson 5 Template)</li> </ul>	
H	29	<ul style="list-style-type: none"> <li>• Use basic facts to approximate decimal quotients with two-digit divisors, reasoning about the placement of the decimal point.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> </ul>	<ul style="list-style-type: none"> <li>• Millions to thousandths place value chart (Lesson 5 Template)</li> </ul>

H	30 & 31	<ul style="list-style-type: none"> <li>• Divide decimal dividends by two-digit divisors, estimating quotients, reasoning about the placement of the decimal point, and making connections to a written method.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> </ul>	
I	32 & 33	<ul style="list-style-type: none"> <li>• Solve division word problems involving multi-digit division with group size unknown and the number of groups unknown.</li> </ul>	<ul style="list-style-type: none"> <li>• Divide Decimals by Multiples of 10 Sprint</li> <li>• Personal white board</li> <li>• Problem Set</li> </ul>	
End-of-Module Assessment: Topics A–I (assessment 1 day, return 1 day, remediation or further application 2 days)				

### MODULE 3

Topic	Lesson #	Objective	Student Materials	Teacher Materials
A	1	<ul style="list-style-type: none"> <li>Add fractions with unlike units using the strategy of creating equivalent fractions.</li> </ul>	<ul style="list-style-type: none"> <li>Find the Missing Numerator or Denominator Sprint</li> <li>Personal white board</li> <li>2 pieces of 41"×41" paper 22 per student (depending on how the folding is completed before drawing the rectangular array model)</li> </ul>	
A	2	<ul style="list-style-type: none"> <li>Add fractions with sums between 1 and 2.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
A	3	<ul style="list-style-type: none"> <li>Subtract fractions with unlike units using the strategy of creating equivalent fractions.</li> </ul>	<ul style="list-style-type: none"> <li>Subtracting Fractions from a Whole Number Sprint</li> <li>Personal white board</li> </ul>	
A	4	<ul style="list-style-type: none"> <li>Subtract fractions from numbers between 1 and 2.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
A	5	<ul style="list-style-type: none"> <li>Solve two-step word problems.</li> </ul>	<ul style="list-style-type: none"> <li>Circle the Equivalent Fraction Sprint</li> <li>Problem Set</li> <li>personal white board</li> </ul>	
Mid-Module Assessment: Topic A (assessment 1/2 day, return 1/2 day, remediation or further applications 2 days)				
B	6	<ul style="list-style-type: none"> <li>Add fractions to and subtract fractions from whole numbers using</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>empty number line (Template) or lined paper</li> </ul>	

		equivalence and the number line as strategies.		
B	7	<ul style="list-style-type: none"> <li>Add fractions making like units numerically.</li> </ul>	<ul style="list-style-type: none"> <li>Add and Subtract Fractions with Like Units Sprint</li> <li>Personal white board</li> </ul>	
B	8	<ul style="list-style-type: none"> <li>Add fractions with sums greater than 2.</li> </ul>	<ul style="list-style-type: none"> <li>Add and Subtract Whole Numbers and Ones with Fraction Units Sprint</li> <li>Personal white board</li> </ul>	
B	9	<ul style="list-style-type: none"> <li>Subtract fractions making like units numerically.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
B	10	<ul style="list-style-type: none"> <li>Subtract fractions greater than or equal to 1.</li> </ul>	<ul style="list-style-type: none"> <li>Subtract Fractions with Unlike Units Sprint</li> <li>Personal white board</li> <li>empty number line (Lesson 6 Template) or lined paper</li> </ul>	
C	11	<ul style="list-style-type: none"> <li>Use fraction benchmark numbers to assess reasonableness of addition and subtraction equations.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
C	12	<ul style="list-style-type: none"> <li>Strategize to solve multi-term problems.</li> </ul>	<ul style="list-style-type: none"> <li>Make Larger Units Sprint</li> <li>Personal white board</li> </ul>	
C	13	<ul style="list-style-type: none"> <li>Solve multi-step word problems; assess reasonableness of</li> </ul>	<ul style="list-style-type: none"> <li>Circle the Smaller Fraction Sprint</li> <li>Problem Set</li> </ul>	

		solutions using benchmark numbers.	<ul style="list-style-type: none"> <li>personal white board</li> </ul>	
C	14	<ul style="list-style-type: none"> <li>Explore part-to-whole relationships.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Problem Set</li> </ul>	
End-of-Module Assessment: Topics A–C (assessment 1/2 day, return 1/2 day, remediation or further applications 2 days)				

#### MODULE 4

Topic	Lesson #	Objective	Student Materials	Teacher Materials
A	1	<ul style="list-style-type: none"> <li>Decompose non-unit fractions and represent them as a whole number times a unit fraction using strip diagrams.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
A	2 & 3	<ul style="list-style-type: none"> <li>Represent the multiplication of <math>n</math> times <math>a/b</math> as <math>(n \times a)/b</math> using the associative property and visual models.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
A	4 & 5	<ul style="list-style-type: none"> <li>Find the product of a whole number and a mixed number using the distributive property.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
A	6	<ul style="list-style-type: none"> <li>Solve multiplicative comparison word problems involving fractions.</li> </ul>	<ul style="list-style-type: none"> <li>Multiply Whole Numbers Times Fractions Sprint</li> <li>Personal white board</li> <li>Problem Set</li> </ul>	

A	7	<ul style="list-style-type: none"> <li>Solve word problems involving the multiplication of a whole number and a fraction including those involving dot plots.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Problem Set</li> </ul>	
B	8	<ul style="list-style-type: none"> <li>Find a fraction of a set concretely and pictorially.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Two-sided counters</li> <li>drinking straws</li> </ul>	
B	9	<ul style="list-style-type: none"> <li>Multiply any whole number by a fraction using strip diagrams.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
B	10	<ul style="list-style-type: none"> <li>Relate a fraction of a set to the repeated addition interpretation of fraction multiplication.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Grade 5 Mathematics Reference Sheet (Reference Sheet)</li> </ul>	
B	11	<ul style="list-style-type: none"> <li>Find a fraction of a measurement, and solve word problems.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Grade 5 Mathematics Reference Sheet (Lesson 10 Reference Sheet)</li> </ul>	<ul style="list-style-type: none"> <li>Grade 5 Mathematics Reference Sheet (Lesson 10 Reference Sheet, posted)</li> </ul>
C	12	<ul style="list-style-type: none"> <li>Compare and evaluate expressions with parentheses and brackets.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Grade 5 Mathematics Reference Sheet (Lesson 10 Reference Sheet)</li> </ul>	
C	13 & 14	<ul style="list-style-type: none"> <li>Solve and create fraction word problems involving</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	

		addition, subtraction, and multiplication.	<ul style="list-style-type: none"> <li>Grade 5 Mathematics Reference Sheet (Lesson 10 Reference Sheet)</li> <li>Problem Set</li> </ul>	
C	15	<ul style="list-style-type: none"> <li>Convert measures involving whole numbers, and solve multi-step word problems.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Grade 5 Mathematics Reference Sheet (Lesson 10 Reference Sheet)</li> </ul>	
C	16	<ul style="list-style-type: none"> <li>Convert mixed unit measurements, and solve multi-step word problems.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Grade 5 Mathematics Reference Sheet (Lesson 10 Reference Sheet)</li> </ul>	
Mid-Module Assessment: Topics A–C (assessment 1/2 day, return 1/2 day, remediation or further applications 2 days)				
D	17	<ul style="list-style-type: none"> <li>Divide a whole number by a unit fraction.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>4" × 2" rectangular paper (several pieces per student)</li> <li>scissors</li> </ul>	
D	18	<ul style="list-style-type: none"> <li>Divide a unit fraction by a whole number.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
D	19	<ul style="list-style-type: none"> <li>Solve problems involving fraction division.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Problem Set</li> </ul>	
D	20	<ul style="list-style-type: none"> <li>Write equations and word problems corresponding to strip</li> </ul>	<ul style="list-style-type: none"> <li>Problem Set</li> <li>personal white board</li> </ul>	

		and number line diagrams.		
E	21	<ul style="list-style-type: none"> <li>Balance a simple budget.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	<ul style="list-style-type: none"> <li>Ben's Budget (Template)</li> </ul>
E	22	<ul style="list-style-type: none"> <li>Explain the difference between gross income and net income. Define income tax and payroll tax.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Ben's Pay Stub (Template)</li> </ul>	<ul style="list-style-type: none"> <li>Ben's Pay Stub (Template)</li> </ul>
E	23	<ul style="list-style-type: none"> <li>Define property tax and sales tax.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	<ul style="list-style-type: none"> <li>Property Tax Bill (Template 1)</li> <li>Clothes Receipt (Template 2)</li> </ul>
E	24	<ul style="list-style-type: none"> <li>Identify the advantages and disadvantages of different methods of payment.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Problem Set</li> </ul>	<ul style="list-style-type: none"> <li>Problem Set</li> <li>Forms of Payment (Template)</li> <li>real world examples of various forms of payment (optional)</li> </ul>
F	25	<ul style="list-style-type: none"> <li>Interpret and evaluate numerical expressions.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> </ul>	
End-of-Module Assessment: Topics A–F (assessment 1/2 day, return 1/2 day, remediation or further applications 2 days)				



MODULE 5

Topic	Lesson #	Objective	Student Materials	Teacher Materials
A	1	<ul style="list-style-type: none"> <li>Explore volume by building with and counting unit cubes.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Ruler</li> <li>20 centimeter cubes</li> <li>centimeter grid paper (Template 1)</li> <li>isometric dot paper (Template 2)</li> </ul>	<ul style="list-style-type: none"> <li>20 centimeter cubes</li> </ul>
A	2	<ul style="list-style-type: none"> <li>Find the volume of a right rectangular prism by packing with cubic units and counting.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Pencil</li> <li>centimeter grid paper (Lesson 1 Template 1, also needed for Homework)</li> <li>scissors</li> <li>tape</li> <li>50 centimeter cubes, net (Template), Problem Set</li> </ul>	
A	3	<ul style="list-style-type: none"> <li>Compose and decompose right rectangular prisms using layers.</li> </ul>	<ul style="list-style-type: none"> <li>Multiply a Fraction and Whole Number Sprint</li> <li>Personal white board</li> <li>27 centimeter cubes, rectangular prism recording sheet (Template)</li> </ul>	<ul style="list-style-type: none"> <li>27 centimeter cubes</li> </ul>
B	4	<ul style="list-style-type: none"> <li>Use multiplication to calculate volume.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>rectangular prism recording sheet (Lesson 3 Template)</li> </ul>	<ul style="list-style-type: none"> <li>Images of rectangular prisms to project</li> </ul>

B	5	<ul style="list-style-type: none"> <li>Use multiplication to connect volume as packing with volume as filling.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Per group: <ul style="list-style-type: none"> <li>centimeter cubes</li> <li>several small watertight containers (preferably right rectangular prisms) marked with a horizontal line for measuring</li> <li>small pitcher of water</li> <li>graduated cylinder labeled with mL</li> <li>class data recording sheet poster</li> <li>ruler or tape measure</li> <li>Problem Set (Problems 1-3)</li> </ul> </li> </ul>	
B	6	<ul style="list-style-type: none"> <li>Find the total volume of solid figures composed of two non-overlapping rectangular prisms.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>15 centimeter cubes</li> <li>dot paper</li> </ul>	<ul style="list-style-type: none"> <li>Drawing of rectangular prism figures</li> </ul>
B	7	<ul style="list-style-type: none"> <li>Solve word problems involving the volume of rectangular prisms with whole number edge lengths.</li> </ul>	<ul style="list-style-type: none"> <li>Multiply a Whole Number by a Fraction Sprint</li> <li>Personal white board</li> <li>Problem Set</li> </ul>	
B	8 9	<ul style="list-style-type: none"> <li>Apply concepts and formulas of volume to design a sculpture using rectangular prisms</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Problem Set</li> <li>project requirements (Template 1)</li> </ul>	<ul style="list-style-type: none"> <li>Copy of student work from Lesson 8</li> </ul>

		within given parameters. (Optional)	<ul style="list-style-type: none"> <li>• box patterns (a–c) (Templates 2–4)</li> <li>• lid patterns (Template 5) (at least three of each template per group)</li> <li>• evaluation rubric (Template 6)</li> <li>• scissors</li> <li>• tape</li> <li>• rulers</li> <li>• 2 copies of Problem Set (1 for use during Concept Development and 1 for independent work)</li> </ul>	<ul style="list-style-type: none"> <li>• evaluation rubric (Lesson 8 Template 6)</li> </ul>
Mid-Module Assessment: Topics A–B (assessment 1 day, return 1 day, remediation or further applications 1 day)				
C	10	<ul style="list-style-type: none"> <li>• Find the area of rectangles with whole-by-mixed and whole-by-fractional number side lengths by tiling, record by drawing, and relate to fraction multiplication.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• 5 large mystery rectangles lettered A–E (1 of each size per group)</li> <li>• patty paper (units for tiling)</li> <li>• Problem Set</li> </ul>	<ul style="list-style-type: none"> <li>• 3-unit <math>\times</math> 2-unit rectangle</li> <li>• patty paper (units for tiling)</li> <li>• large chart paper (for recording dimensions of rectangles)</li> <li>• personal white board</li> </ul>
C	11	<ul style="list-style-type: none"> <li>• Measure to find the area of rectangles with fractional side lengths.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• Ruler</li> <li>• Problem Set</li> </ul>	<ul style="list-style-type: none"> <li>• Ruler</li> <li>• projector</li> </ul>
C	12	<ul style="list-style-type: none"> <li>• Multiply mixed number factors, and relate to the distributive property and the area model.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> </ul>	

C	13 & 14	<ul style="list-style-type: none"> <li>Solve real-world problems involving area of figures with fractional side lengths using visual models and/or equations.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Problem Set</li> </ul>	<ul style="list-style-type: none"> <li>Shape sheet (Template)</li> </ul>
D	15	<ul style="list-style-type: none"> <li>Analyze and classify triangles based on side length, angle measure, or both.</li> </ul>	<ul style="list-style-type: none"> <li>Triangles (Template) one set per group</li> <li>Practice Sheet</li> <li>ruler</li> <li>protractor</li> </ul>	<ul style="list-style-type: none"> <li>Triangles (Template)</li> <li>Practice Sheet</li> <li>ruler</li> </ul>
D	16	<ul style="list-style-type: none"> <li>Define and construct triangles from given criteria.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Square grid paper</li> <li>ruler</li> <li>protractor</li> </ul>	<ul style="list-style-type: none"> <li>Square grid paper</li> <li>ruler</li> <li>protractor</li> </ul>
D	17	<ul style="list-style-type: none"> <li>Draw trapezoids to clarify their attributes, and define trapezoids based on those attributes.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Collection of polygons (Template 1, 1 per pair of students)</li> <li>ruler</li> <li>protractor</li> <li>set square (or right angle template)</li> <li>scissors</li> <li>crayons, markers, or colored pencils</li> <li>blank paper for drawing</li> <li>quadrilateral hierarchy (Template 2)</li> </ul>	<ul style="list-style-type: none"> <li>Shape sheet (Lesson 14 Template)</li> <li>Collection of polygons (Template 1)</li> <li>ruler</li> <li>protractor</li> <li>set square (or right angle template)</li> <li>quadrilateral hierarchy: color (Template 3)</li> </ul>

D	18	<ul style="list-style-type: none"> <li>• Draw parallelograms to clarify their attributes, and define parallelograms based on those attributes.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• Ruler</li> <li>• protractor</li> <li>• set square (or right angle template)</li> <li>• scissors</li> <li>• crayons, markers, or colored pencils</li> <li>• blank paper for drawing</li> <li>• quadrilateral hierarchy with parallelogram (Template 1)</li> </ul>	<ul style="list-style-type: none"> <li>• Ruler</li> <li>• protractor</li> <li>• set square (or right angle template)</li> <li>• quadrilateral hierarchy with parallelogram: color (Template 2)</li> </ul>
D	19	<ul style="list-style-type: none"> <li>• Draw rectangles and rhombuses to clarify their attributes, and define rectangles and rhombuses based on those attributes.</li> </ul>	<ul style="list-style-type: none"> <li>• Divide Whole Numbers by Fractions and Fractions by Whole Numbers Sprint</li> <li>• Personal white board</li> <li>• Ruler</li> <li>• set square or square template</li> <li>• protractor</li> <li>• scissors</li> <li>• quadrilateral hierarchy with square (Template 1)</li> </ul>	<ul style="list-style-type: none"> <li>• Quadrilateral hierarchy with square: color (Template 2)</li> </ul>
D	20	<ul style="list-style-type: none"> <li>• Draw kites and squares to clarify their attributes, and define kites and squares based on those attributes.</li> </ul>	<ul style="list-style-type: none"> <li>• Multiply by Multiples of 10 and 100 Sprint</li> <li>• Personal white board</li> <li>• Ruler</li> <li>• set square or square template</li> <li>• protractor</li> <li>• scissors</li> <li>• quadrilateral hierarchy with kite (Template 1)</li> </ul>	<ul style="list-style-type: none"> <li>• Quadrilateral hierarchy with kite: color (Template 2)</li> </ul>

D	21	<ul style="list-style-type: none"> <li>Classify two-dimensional figures in a hierarchy based on properties.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>shape name cards (Template 1, 1 per pair of students)</li> <li>shapes for sorting (Template 2, 1 per pair of students)</li> <li>protractor</li> <li>ruler</li> <li>set square</li> <li>quadrilateral hierarchy with kite (Lesson 20 Template 1, 1 per pair of students)</li> <li>scissors</li> <li>glue</li> </ul>	<ul style="list-style-type: none"> <li>Quadrilateral hierarchy with kite: color (Lesson 20 Template 2)</li> <li>image of a trapezoid</li> </ul>
D	22	<ul style="list-style-type: none"> <li>Draw and identify varied two-dimensional figures from given attributes.</li> </ul>	<ul style="list-style-type: none"> <li>Divide by Multiples of 10 and 100 Sprint</li> <li>Personal white board</li> <li>Task cards, 6 for each pair of students (Templates 1–4)</li> <li>ruler</li> <li>set square</li> <li>protractor</li> <li>Problem Set (or blank paper)</li> </ul>	
End-of-Module Assessment: Topics A–D (assessment 1 day, return 1 day, remediation or further applications 1 day)				

## MODULE 6

Topic	Lesson #	Objective	Student Materials	Teacher Materials
A	1	<ul style="list-style-type: none"> <li>Construct a coordinate system on a line.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Straightedge or ruler</li> <li>2 pieces of unlined paper</li> <li>1 piece of lined paper</li> <li>two 1" × 4 14" tag board strips</li> </ul>	<ul style="list-style-type: none"> <li>Teacher-created number lines in various orientations and scales (see Problem 3 in the Concept Development)</li> </ul>
A	2	<ul style="list-style-type: none"> <li>Construct a coordinate system on a plane.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Set square</li> <li>equal unit strip created during Lesson 1</li> <li>unlined paper</li> <li>coordinate plane (Template) (multiple sheets per student)</li> </ul>	
A	3 & 4	<ul style="list-style-type: none"> <li>Name points using coordinate pairs, and use the coordinate pairs to plot points.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Straightedge or ruler</li> <li>unlabeled coordinate plane (Template 2)</li> <li>Problem Set (1 per student/per game)</li> <li>red pencil or crayon (1 per student)</li> <li>black pencil or crayon (1 per student)</li> <li>folder (1 per pair of students)</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate plane (Lesson 2 Template)</li> <li>Coordinate grid (Template 1)</li> <li>Coordinate grid (Fluency Template)</li> </ul>

A	5 & 6	<ul style="list-style-type: none"> <li>Investigate patterns in vertical and horizontal lines, and interpret points on the plane as distances from the axes.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Straightedge</li> <li>coordinate plane practice (Template)</li> <li>1 red and 1 blue pencil or crayon</li> </ul>	<ul style="list-style-type: none"> <li>Millions through thousandths place value chart (Fluency Template)</li> </ul>
B	7	<ul style="list-style-type: none"> <li>Plot points, use them to draw lines in the plane, and describe patterns within the coordinate pairs.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Coordinate plane (Template)</li> <li>straightedge</li> </ul>	<ul style="list-style-type: none"> <li>Millions through thousandths place value chart (Lesson 6 Fluency Template)</li> <li>Coordinate grid (Fluency Template)</li> <li>Coordinate plane (Template)</li> <li>straightedge</li> </ul>
B	8	<ul style="list-style-type: none"> <li>Generate a number pattern from a given rule, and plot the points.</li> </ul>	<ul style="list-style-type: none"> <li>Multiply Decimals by 10, 100, and 1,000 Sprint</li> <li>Personal white board</li> <li>coordinate grid insert (Fluency Template)</li> <li>coordinate plane (Template)</li> <li>straightedge</li> </ul>	
B	9	<ul style="list-style-type: none"> <li>Generate two number patterns from given rules, plot the points, and analyze the patterns.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>coordinate grid insert (Lesson 8 Fluency Template)</li> <li>Coordinate plane (Template)</li> <li>straightedge</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate plane (Template)</li> <li>straightedge</li> </ul>



B	10	<ul style="list-style-type: none"> <li>Compare the lines and patterns generated by addition rules and multiplication rules.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>coordinate plane (Template)</li> <li>straightedge</li> <li>set square or right angle template</li> </ul>	
B	11	<ul style="list-style-type: none"> <li>Analyze number patterns created from mixed operations.</li> </ul>	<ul style="list-style-type: none"> <li>Round to the Nearest One Sprint</li> <li>Personal white board</li> <li>straightedge</li> <li>coordinate plane (Template)</li> </ul>	
B	12	<ul style="list-style-type: none"> <li>Create a rule to generate a number pattern, and plot the points.</li> </ul>	<ul style="list-style-type: none"> <li>Subtract Decimals Sprint</li> <li>Personal white board</li> <li>coordinate grid insert (Lesson 8 Fluency Template)</li> <li>coordinate plane (Template)</li> </ul>	
B	13	<ul style="list-style-type: none"> <li>Use coordinate systems to solve real-world problems.</li> </ul>	<ul style="list-style-type: none"> <li>Subtracting Fractions from a Whole Number Sprint</li> <li>Personal white board</li> <li>Problem Set</li> </ul>	
Mid-Module Assessment: Topics A–B (assessment 2 days, return 1 day, remediation or further applications 1 day)				
C	14	<ul style="list-style-type: none"> <li>Collect and represent data using dot plots.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Application Problem Template</li> </ul>	<ul style="list-style-type: none"> <li>Application Problem Template</li> </ul>

			<ul style="list-style-type: none"> <li>• Centimeter ruler</li> <li>• Problem Set</li> </ul>	
C	15	<ul style="list-style-type: none"> <li>• Represent data using stem-and-leaf plots.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• Application Problem Template</li> <li>• Problem Set</li> <li>• two sticky notes</li> <li>• index finger measurement from Lesson 14</li> </ul>	<ul style="list-style-type: none"> <li>• Application Problem Template</li> </ul>
C	16	<ul style="list-style-type: none"> <li>• Collect and represent discrete paired data on a scatterplot.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• coordinate grid insert (Lesson 8 Fluency Template)</li> <li>• Problem Set</li> </ul>	<ul style="list-style-type: none"> <li>• Coordinate grid (Fluency Template)</li> <li>• Templates 1–3</li> </ul>
C	17	<ul style="list-style-type: none"> <li>• Describe patterns and solve problems by using scatterplots.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• Centimeter ruler</li> <li>• Problem Set</li> </ul>	<ul style="list-style-type: none"> <li>• Coordinate grid (Fluency Template)</li> <li>• Templates 1–3</li> </ul>
C	18	<ul style="list-style-type: none"> <li>• Solve problems using data.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• Template (one set of data cards for each pair or small group of students)</li> </ul>	
End-of-Module Assessment: Topics A-C (assessment 2 days, return 1 day, remediation or further applications 1 day)				
D	19	<ul style="list-style-type: none"> <li>• Make sense of complex, multi-step problems, and persevere in solving</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• Problem Set</li> </ul>	

		them. Share and critique peer solutions.		
D	20	<ul style="list-style-type: none"> <li>• Make sense of complex, multi-step problems, and persevere in solving them.</li> <li>• Share and critique peer solutions.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• Lesson 19 Problem Set</li> </ul>	
D	21	<ul style="list-style-type: none"> <li>• Make sense of complex, multi-step problems, and persevere in solving them.</li> <li>• Share and critique peer solutions.</li> </ul>	<ul style="list-style-type: none"> <li>• Change Mixed Numbers into Improper Fractions Sprint</li> <li>• Lesson 19 Problem Set</li> </ul>	
D	22	<ul style="list-style-type: none"> <li>• Make sense of complex, multi-step problems, and persevere in solving them.</li> <li>• Share and critique peer solutions.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> </ul>	
D	23	<ul style="list-style-type: none"> <li>• Make sense of complex, multi-step problems, and persevere in solving</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• Student work from Lessons 19, 20, and 22</li> </ul>	

		them. Share and critique peer solutions.		
E	24	<ul style="list-style-type: none"> <li>• Draw symmetric figures on the coordinate plane.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• Blank paper</li> <li>• ruler</li> <li>• protractor</li> <li>• Coordinate plane (Template)</li> </ul>	
E	25	<ul style="list-style-type: none"> <li>• Plot data on line graphs and analyze trends.</li> </ul>	<ul style="list-style-type: none"> <li>• Make Larger Units Sprint</li> <li>• Personal white board</li> <li>• Line graph practice sheet (Template)</li> </ul>	<ul style="list-style-type: none"> <li>• Line graph practice sheet (Template)</li> </ul>
E	26	<ul style="list-style-type: none"> <li>• Solidify writing and interpreting numerical expressions.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• expression cards (Template 1)</li> <li>• timer</li> <li>• Comparing expressions game board (Template 2)</li> <li>• piece of paper</li> </ul>	
E	27	<ul style="list-style-type: none"> <li>• Solidify writing and interpreting numerical expressions.</li> </ul>	<ul style="list-style-type: none"> <li>• Blank paper</li> <li>• personal white board</li> </ul>	
E	28	<ul style="list-style-type: none"> <li>• Solidify fluency with Grade 5 skills.</li> </ul>	<ul style="list-style-type: none"> <li>• Fluency activities (Template)</li> <li>• Problem Set</li> <li>• personal white board</li> </ul>	

E	29	<ul style="list-style-type: none"> <li>• Solidify the vocabulary of geometry.</li> </ul>	<ul style="list-style-type: none"> <li>• Multiply Decimals Sprint</li> <li>• Personal white board</li> <li>• Chart paper or personal white board</li> <li>• scissors</li> <li>• geometry definitions (Template 1 copied on cardstock)</li> <li>• geometry terms (Template 2 copied on cardstock)</li> <li>• Math Picture Game directions (Template 3)</li> <li>• small envelope</li> <li>• 30-second timer</li> </ul>	
E	30	<ul style="list-style-type: none"> <li>• Solidify the vocabulary of geometry.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal white board</li> <li>• Geometry definitions (Lesson 29 Template 1)</li> <li>• geometry terms (Lesson 29 Template 2)</li> <li>• game directions (Template 1)</li> <li>• bingo card (Template 2)</li> <li>• scissors</li> </ul>	
E	31	<ul style="list-style-type: none"> <li>• Explore the Fibonacci sequence.</li> </ul>	<ul style="list-style-type: none"> <li>• Protractor</li> <li>• white paper</li> <li>• ruler</li> <li>• Personal white board</li> <li>• Problem Set</li> <li>• red crayon</li> <li>• ruler or straightedge</li> </ul>	<ul style="list-style-type: none"> <li>• Collection of pine cones</li> <li>• flowers</li> <li>• “Doodling in Math: Spirals, Fibonacci, and Being a Plant” by Vi Hart (<a href="http://youtu.be/ahXIMUkSXX0">http://youtu.be/ahXIMUkSXX0</a>)</li> </ul>

			<ul style="list-style-type: none"> <li>calculator per student or pair</li> </ul>	
E	32	<ul style="list-style-type: none"> <li>Explore patterns in saving money.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Problem Set</li> </ul>	<ul style="list-style-type: none"> <li>Problem Set</li> </ul>
E	33	<ul style="list-style-type: none"> <li>Design and construct boxes to house materials for summer use.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Problem Set</li> <li>3 pieces of 812"×11 " cardstock paper trimmed to 27 cm by 21 cm</li> <li>scissors</li> <li>tape</li> <li>ruler</li> <li>summer practice materials</li> </ul>	
E	34	<ul style="list-style-type: none"> <li>Design and construct boxes to house materials for summer use.</li> </ul>	<ul style="list-style-type: none"> <li>Personal white board</li> <li>Rulers, Problem Set (same page printed on two sides), Lesson 33 Problem Set</li> </ul>	