

**Course Description:**

Semester B of grade 4 math has learners continuing to work with fractions. They will learn to multiply fractions and convert them to decimals. Students will also begin to learn to equivalent measurements of length, weight, mass, and capacity. They will also learn helpful skills in understanding time, distance, and money. Students will develop an understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry. Lessons on rectangles, line plots, angles, figure drawing, polygons, and symmetry will be taught. Semester B continues to use varied forms of instruction that allow students to learn these skills in a practical manner.

**Materials needed:** Colored pencils, crayons or thin markers, Calculator (handheld or online), Ruler, and Scissors, protractor, scale (optional)

Module	Lesson Title	Objectives	Assessments
1	Fraction Multiplication	<ul style="list-style-type: none"> <li>Identify solutions on a number line.</li> </ul>	<ul style="list-style-type: none"> <li>Fraction Multiplication Quiz</li> </ul>
	Fraction Multiplication Using Visual Models	<ul style="list-style-type: none"> <li>Use visual models to represent word problems with fractions.</li> </ul>	<ul style="list-style-type: none"> <li>Fraction Multiplication Using Visual Models Quiz</li> </ul>
	Multiplying a Whole Number by a Fraction	<ul style="list-style-type: none"> <li>Multiply a fraction by a whole number.</li> </ul>	<ul style="list-style-type: none"> <li>Multiplying a Whole Number by a Fraction Quiz</li> </ul>
	Using Multiplication to Solve Word Problems With Fractions	<ul style="list-style-type: none"> <li>Solve word problems involving multiplication of whole numbers and fractions.</li> </ul>	<ul style="list-style-type: none"> <li>Using Multiplication to Solve Word Problems With Fractions Quiz</li> <li>Fraction Multiplication Exam</li> </ul>
	Fractions With Denominators of 10 and 100	<ul style="list-style-type: none"> <li>Identify fractions with denominators of 10.</li> <li>Identify fractions with denominators of 100.</li> </ul>	<ul style="list-style-type: none"> <li>Fractions With Denominators of 10 and 100 Quiz</li> </ul>

Module	Lesson Title	Objectives	Assessments
	Comparing Tenths and Hundredths	<ul style="list-style-type: none"> <li>Use grids to compare fractions with denominators 10 and 100.</li> <li>Write equivalent fractions with denominators 10 and 100.</li> </ul>	<ul style="list-style-type: none"> <li>Comparing Tenths and Hundredths Quiz</li> </ul>
	Add Tenths and Hundredths	<ul style="list-style-type: none"> <li>Add fractions with denominators 10 and 100.</li> </ul>	<ul style="list-style-type: none"> <li>Add Tenths and Hundredths Quiz</li> <li>Comparing Fractions Exam</li> </ul>
	Identifying Fractions as Division	<ul style="list-style-type: none"> <li>Relate division to fractions.</li> </ul>	<ul style="list-style-type: none"> <li>Identifying Fractions as Division Quiz</li> </ul>
	Fractions as Decimals	<ul style="list-style-type: none"> <li>Write decimals to the hundredths place.</li> </ul>	<ul style="list-style-type: none"> <li>Fractions as Decimals Quiz</li> </ul>
	Decimals on Number Lines	<ul style="list-style-type: none"> <li>Locate decimals on a number line.</li> </ul>	<ul style="list-style-type: none"> <li>Decimals on Number Lines Quiz</li> </ul>
	Comparing Fractions to Decimals	<ul style="list-style-type: none"> <li>Compare fractions to decimals.</li> </ul>	<ul style="list-style-type: none"> <li>Comparing Fractions to Decimals Quiz</li> <li>Fractions to Decimals Exam</li> </ul>
<b>2</b>	Compare Decimals Using Area Models	<ul style="list-style-type: none"> <li>Compare decimals using area models.</li> </ul>	<ul style="list-style-type: none"> <li>Compare Decimals Using Area Models Quiz</li> </ul>
	Compare Decimals Using Decimal Circles	<ul style="list-style-type: none"> <li>Compare decimals using decimal circles.</li> </ul>	<ul style="list-style-type: none"> <li>Compare Decimals Using Decimal Circles Quiz</li> </ul>
	Compare Decimals Using Number Lines	<ul style="list-style-type: none"> <li>Compare decimals using number lines and meter sticks.</li> </ul>	<ul style="list-style-type: none"> <li>Compare Decimals Using Number Lines Quiz</li> </ul>
	Explaining Decimal Comparisons	<ul style="list-style-type: none"> <li>Demonstrate and explain the reasonableness of comparisons.</li> </ul>	<ul style="list-style-type: none"> <li>Explaining Decimal Comparisons Quiz</li> <li>Comparing Decimals Exam</li> </ul>
	Represent Equivalent Measures of	<ul style="list-style-type: none"> <li>Use tables to represent equivalent measurements.</li> </ul>	<ul style="list-style-type: none"> <li>Represent Equivalent Measures of Customary Units of Length Quiz</li> </ul>

Module	Lesson Title	Objectives	Assessments
	Customary Units of Length		
	Measuring With Inches	<ul style="list-style-type: none"> <li>• Measure, compare, and estimate length in inches, feet, yards, miles.</li> </ul>	<ul style="list-style-type: none"> <li>• Measuring With Inches Quiz</li> </ul>
	Measuring and Converting Length Measurements	<ul style="list-style-type: none"> <li>• Measure, compare, and estimate length in inches, feet, yards, miles.</li> <li>• Compare lengths by converting measurements from smaller to larger units and from larger units to smaller units.</li> </ul>	<ul style="list-style-type: none"> <li>• Measuring and Converting Length Measurements Quiz</li> </ul>
	Estimating Measurements of Length	<ul style="list-style-type: none"> <li>• Measure, compare, and estimate length in kilometers, meters, and centimeters.</li> <li>• Measure, compare, and estimate length in inches, feet, yards, miles.</li> </ul>	<ul style="list-style-type: none"> <li>• Estimating Measurements of Length Quiz</li> <li>• Length Exam</li> </ul>
	Measuring Weight and Mass	<ul style="list-style-type: none"> <li>• Measure, compare, and estimate weight and mass in, pounds, ounces, tons, kilograms, or grams.</li> </ul>	<ul style="list-style-type: none"> <li>• Measuring Weight and Mass Quiz</li> </ul>
	Equivalent Measurements of Weight	<ul style="list-style-type: none"> <li>• Use tables to represent equivalent measurements.</li> </ul>	<ul style="list-style-type: none"> <li>• Equivalent Measurements of Weight Quiz</li> </ul>
	Weight Conversions	<ul style="list-style-type: none"> <li>• Compare weights and masses by converting measurements from smaller to larger units and from larger units to smaller units.</li> </ul>	<ul style="list-style-type: none"> <li>• Weight Conversions Quiz</li> </ul>
	Problem Solving and Estimating Weight	<ul style="list-style-type: none"> <li>• Solve word problems involving masses of objects.</li> <li>• Use diagrams to represent measurement quantities with a scale.</li> </ul>	<ul style="list-style-type: none"> <li>• Problem Solving and Estimating Weight Quiz</li> <li>• Measuring Weight and Mass Exam</li> </ul>

Module	Lesson Title	Objectives	Assessments
		<ul style="list-style-type: none"> <li>Measure, compare, and estimate weight and mass in, pounds, ounces, tons, kilograms, or grams.</li> </ul>	
3	Liters and Milliliters	<ul style="list-style-type: none"> <li>Measure and compare capacity in liters, milliliters, ounces, cups, pints, quarts and gallons.</li> </ul>	<ul style="list-style-type: none"> <li>Liters and Milliliters Quiz</li> </ul>
	Volume Conversions	<ul style="list-style-type: none"> <li>Measure and compare capacity in liters, milliliters, ounces, cups, pints, quarts and gallons.</li> <li>Compare capacities by converting measurements from smaller to larger units and from larger units to smaller units.</li> </ul>	<ul style="list-style-type: none"> <li>Volume Conversions Quiz</li> </ul>
	Solving Problems About Volume	<ul style="list-style-type: none"> <li>Solve word problems involving liquid volume.</li> </ul>	<ul style="list-style-type: none"> <li>Solving Problems About Volume Quiz</li> <li>Measuring Capacity Exam</li> </ul>
	What is Time?	<ul style="list-style-type: none"> <li>Measure and compare time in hours, minutes and seconds.</li> </ul>	<ul style="list-style-type: none"> <li>What is Time? Quiz</li> </ul>
	Solving Elapsed Time Problems	<ul style="list-style-type: none"> <li>Solve word problems involving intervals of time.</li> </ul>	<ul style="list-style-type: none"> <li>Solving Elapsed Time Problems Quiz</li> </ul>
	Solving Problems With Time Conversions	<ul style="list-style-type: none"> <li>Solve word problems that apply time conversions.</li> </ul>	<ul style="list-style-type: none"> <li>Solving Problems With Time Conversions Quiz</li> </ul>
	Solving Problems With Time and Distance	<ul style="list-style-type: none"> <li>Solve word problems involving time and distance.</li> </ul>	<ul style="list-style-type: none"> <li>Solving Problems With Time and Distance Quiz</li> <li>Time and Distance Exam</li> </ul>
	Money Conversions	<ul style="list-style-type: none"> <li>Express monetary amounts from a larger unit in terms of a smaller unit.</li> </ul>	<ul style="list-style-type: none"> <li>Money Conversions Quiz</li> </ul>
	Solving Problems With Money	<ul style="list-style-type: none"> <li>Solve word problems involving money.</li> </ul>	<ul style="list-style-type: none"> <li>Solving Problems With Money Quiz</li> </ul>

Module	Lesson Title	Objectives	Assessments
	Estimating With Money	<ul style="list-style-type: none"> <li>Estimate money to solve word problems.</li> </ul>	<ul style="list-style-type: none"> <li>Estimating With Money Quiz</li> </ul>
	Money as Fractions	<ul style="list-style-type: none"> <li>Using equivalent measurements, solve problems with fractions and decimals.</li> </ul>	<ul style="list-style-type: none"> <li>Money as Fractions Quiz</li> <li>Money Exam</li> </ul>
4	The Rectangle	<ul style="list-style-type: none"> <li>Identify length and width of rectangles.</li> <li>Construct rectangles and label the parts.</li> </ul>	<ul style="list-style-type: none"> <li>The Rectangle Quiz</li> </ul>
	Perimeter of a Rectangle	<ul style="list-style-type: none"> <li>Find the perimeter of a rectangle.</li> </ul>	<ul style="list-style-type: none"> <li>Perimeter of a Rectangle Quiz</li> </ul>
	Area of Rectangles	<ul style="list-style-type: none"> <li>Find the area of rectangles by covering them with unit squares or by counting squares in models.</li> <li>Find the area of a rectangle, given its length and width.</li> </ul>	<ul style="list-style-type: none"> <li>Area of Rectangles Quiz</li> </ul>
	Area and Perimeter	<ul style="list-style-type: none"> <li>Given the area or perimeter, find either the length or the width of a rectangle.</li> </ul>	<ul style="list-style-type: none"> <li>Area and Perimeter Quiz</li> <li>Rectangles Exam</li> </ul>
	Measuring Inches	<ul style="list-style-type: none"> <li>Measure objects up to an eighth of an inch.</li> </ul>	<ul style="list-style-type: none"> <li>Measuring Inches Quiz</li> </ul>
	Line Plots	<ul style="list-style-type: none"> <li>Read line plots and represent measurements on a line plot.</li> </ul>	<ul style="list-style-type: none"> <li>Line Plots Quiz</li> </ul>
	Problem Solving with Line Plots	<ul style="list-style-type: none"> <li>Add and subtract fractions based on data from a line plot.</li> </ul>	<ul style="list-style-type: none"> <li>Problem Solving with Line Plots Quiz</li> <li>Line Plots Exam</li> </ul>
	Rays	<ul style="list-style-type: none"> <li>Define and name rays.</li> </ul>	<ul style="list-style-type: none"> <li>Rays Quiz</li> </ul>
	Angles	<ul style="list-style-type: none"> <li>Define and name angles.</li> </ul>	<ul style="list-style-type: none"> <li>Angles Quiz</li> </ul>
	Angles and Circles	<ul style="list-style-type: none"> <li>Identify angles by using circles.</li> <li>Use word problems to explore one-degree turns.</li> </ul>	<ul style="list-style-type: none"> <li>Angles and Circles Quiz</li> <li>Angles Exam</li> </ul>
5	Types of Angles	<ul style="list-style-type: none"> <li>Identify types of angles (acute, obtuse, right).</li> </ul>	<ul style="list-style-type: none"> <li>Types of Angles Quiz</li> </ul>

Module	Lesson Title	Objectives	Assessments
	Measuring Angles	<ul style="list-style-type: none"> <li>Use a protractor to measure angles to the nearest degree.</li> </ul>	<ul style="list-style-type: none"> <li>Measuring Angles Quiz</li> </ul>
	Constructing Angles	<ul style="list-style-type: none"> <li>Construct angles using a protractor and straight edge.</li> </ul>	<ul style="list-style-type: none"> <li>Constructing Angles Quiz</li> <li>Constructing Angles Exam</li> </ul>
	Adding Angles	<ul style="list-style-type: none"> <li>Find the sum of two angles.</li> </ul>	<ul style="list-style-type: none"> <li>Adding Angles Quiz</li> </ul>
	Subtracting Angles	<ul style="list-style-type: none"> <li>Decompose angles into smaller parts.</li> </ul>	<ul style="list-style-type: none"> <li>Subtracting Angles Quiz</li> </ul>
	Writing Equations	<ul style="list-style-type: none"> <li>Use equations to express the sum and difference of angles.</li> </ul>	<ul style="list-style-type: none"> <li>Writing Equations Quiz</li> <li>Angle Applications Exam</li> </ul>
	Drawing Geometric Basics	<ul style="list-style-type: none"> <li>Identify and draw points, lines, segments, rays, angles.</li> </ul>	<ul style="list-style-type: none"> <li>Drawing Geometric Basics Quiz</li> </ul>
	Parallel and Perpendicular Lines	<ul style="list-style-type: none"> <li>Identify the characteristics of perpendicular and parallel lines.</li> <li>Draw perpendicular and parallel lines.</li> </ul>	<ul style="list-style-type: none"> <li>Parallel and Perpendicular Lines Quiz</li> </ul>
	Two-Dimensional Shapes	<ul style="list-style-type: none"> <li>Identify, describe, and categorize common 2-dimensional shapes.</li> </ul>	<ul style="list-style-type: none"> <li>Two-Dimensional Shapes Quiz</li> <li>Figure Drawings Exams</li> </ul>
6	Triangles	<ul style="list-style-type: none"> <li>Identify types of angles (acute, obtuse, right).</li> </ul>	<ul style="list-style-type: none"> <li>Triangles Quiz</li> </ul>
	Quadrilaterals	<ul style="list-style-type: none"> <li>Identify the attributes of quadrilaterals.</li> </ul>	<ul style="list-style-type: none"> <li>Quadrilaterals Quiz</li> </ul>
	Polygons	<ul style="list-style-type: none"> <li>Identify and describe polygons.</li> </ul>	<ul style="list-style-type: none"> <li>Polygons Quiz</li> <li>Polygons Exam</li> </ul>
	Symmetry in Shapes	<ul style="list-style-type: none"> <li>Define symmetry.</li> <li>Identify the line of symmetry in figures.</li> </ul>	<ul style="list-style-type: none"> <li>Symmetry in Shapes Quiz</li> </ul>
	Lines of Symmetry	<ul style="list-style-type: none"> <li>Draw lines of symmetry in figures.</li> </ul>	<ul style="list-style-type: none"> <li>Drawing Lines of Symmetry Quiz</li> </ul>
	Tessellation	<ul style="list-style-type: none"> <li>Create tessellations.</li> </ul>	<ul style="list-style-type: none"> <li>Tessellation Quiz</li> <li>Symmetry Exam</li> </ul>

