

Course Description:

Students will learn math topics outlined in this course drawing from a variety of sources, including hands-on activities, interactive lessons, and practical math applications. Students will focus on several critical areas including but not limited to developing fluency with addition, subtraction, multiplication, and division of fractions. They will also learn to extend division to 2-digit divisors, integrate decimal fractions into the place value system, and increase an understanding of operations with decimals to hundredths. They will develop fluency with whole numbers and decimal operations. The semester begins with operations and expressions, moves into decimals and money, and ends with more work on fractions. Learners will gain valuable skills as they carry out activities that model real life situations like grocery shopping throughout the semester.

Materials needed: Calculator, handheld or online, Dice, and Scissors

Module	Lesson Title	Objectives	Assessments
1	Order of Operations	<ul style="list-style-type: none"> Evaluate expressions using the basic order of operations. 	<ul style="list-style-type: none"> Order of Operations Quiz
	Parentheses, Brackets and Braces	<ul style="list-style-type: none"> Use symbols such as parentheses, brackets or braces in numerical expressions. Evaluate expressions that use these 	<ul style="list-style-type: none"> Parentheses, Brackets and Braces Quiz Operations Exam
	Translating Words to Math	<ul style="list-style-type: none"> Translate words into math. 	<ul style="list-style-type: none"> Translating Words to Math Quiz
	Translating Math to Words	<ul style="list-style-type: none"> Translate math into words. 	<ul style="list-style-type: none"> Translating Math to Words Quiz
	Meaning of Math Expressions	<ul style="list-style-type: none"> Recognize the meanings of numerical expressions. 	<ul style="list-style-type: none"> Meaning of Math Expressions Quiz

Module	Lesson Title	Objectives	Assessments
	Translation Application	<ul style="list-style-type: none"> • Translate between words and math. • Write simple expressions that include all operations. • Recognize the meanings of numerical expressions. 	<ul style="list-style-type: none"> • Translation Application Quiz • Expressions Exam
	Patterns and Sequences	<ul style="list-style-type: none"> • Create numerical patterns using different rules. 	<ul style="list-style-type: none"> • Patterns Quiz • Practice Creating Pattern Rules Assignment
	Relationships Between Sequences	<ul style="list-style-type: none"> • Identify and explain the relationships between corresponding terms of patterns. 	<ul style="list-style-type: none"> • Relationships Between Sequences Quiz
	Ordered Pairs	<ul style="list-style-type: none"> • Using two patterns, generate and graph ordered pairs from the corresponding terms. 	<ul style="list-style-type: none"> • Ordered Pairs Quiz • Patterns and Graphs Exam
2	Place Value in Whole Numbers	<ul style="list-style-type: none"> • Identify place value in multi-digit whole numbers. 	<ul style="list-style-type: none"> • Place Value in Whole Numbers Quiz
	Place Value in Decimals	<ul style="list-style-type: none"> • Identify place value in decimal numbers. 	<ul style="list-style-type: none"> • Place Value in Decimals Quiz
	Place Value Relationships	<ul style="list-style-type: none"> • Identify and describe relationships between numbers in adjacent place values. 	<ul style="list-style-type: none"> • Place Value Relationships Quiz • Place Value Exam
	Exponents	<ul style="list-style-type: none"> • Write numbers in exponential, expanded, and standard forms. 	<ul style="list-style-type: none"> • Exponents Quiz
	Multiplying with Powers of 10	<ul style="list-style-type: none"> • Identify and explain patterns of zeros when a number is multiplied by powers of 10. 	<ul style="list-style-type: none"> • Multiplying with Powers of 10 Quiz

Module	Lesson Title	Objectives	Assessments
		<ul style="list-style-type: none"> Use whole-number exponents to denote powers of 10. 	
	Multiplying Decimals by Powers of 10	<ul style="list-style-type: none"> Identify and explain patterns of decimal point placement when multiplying decimals by powers of 10. 	<ul style="list-style-type: none"> Multiplying Decimals by Powers of 10 Quiz
	Dividing Decimals by Powers of 10	<ul style="list-style-type: none"> Identify and explain patterns of decimal point placement when dividing decimals by powers of 10. 	<ul style="list-style-type: none"> Dividing Decimals by Powers of 10 Quiz Powers of Ten Exam
3	Decimals	<ul style="list-style-type: none"> Read and write decimal numbers in written forms to the thousandths place. 	<ul style="list-style-type: none"> Decimals Quiz
	Expanded Form	<ul style="list-style-type: none"> Read decimal numbers in expanded and written forms, to the thousandths place. Write decimal numbers using expanded and written forms, to the thousandths place. 	<ul style="list-style-type: none"> Expanded Form Quiz
	Comparing Decimals	<ul style="list-style-type: none"> Compare two decimal numbers, to the thousandths place. 	<ul style="list-style-type: none"> Comparing Decimals Quiz Comparing Decimals Exam
	Rounding Whole Numbers	<ul style="list-style-type: none"> Round whole numbers to various place value places. 	<ul style="list-style-type: none"> Rounding Whole Numbers Quiz
	Rounding Decimals	<ul style="list-style-type: none"> Round decimals to the 10th, 100th, 1000th places. 	<ul style="list-style-type: none"> Rounding Decimals Quiz

Module	Lesson Title	Objectives	Assessments
	Estimating Addition and Subtraction	<ul style="list-style-type: none"> Estimate operations by rounding decimal numbers. 	<ul style="list-style-type: none"> Estimating Addition and Subtraction Quiz
	Estimating Using Compatible Numbers	<ul style="list-style-type: none"> Estimate operations by using compatible numbers. 	<ul style="list-style-type: none"> Estimating Using Compatible Numbers Quiz Estimating Decimals Exam
4	Multiplying with One-digit Numbers	<ul style="list-style-type: none"> Multiply multi-digit whole numbers by one-digit whole numbers with efficiency and flexibility. 	<ul style="list-style-type: none"> Multiplying with One-digit Numbers Quiz
	Multiplying with Multi-digit Numbers	<ul style="list-style-type: none"> Multiply two-digit whole numbers by two-digit whole numbers with efficiency and flexibility. Multiply multi-digit whole numbers with efficiency and flexibility. 	<ul style="list-style-type: none"> Multiplying with Multi-digit Numbers Quiz
	Solving Problems with Multiplication	<ul style="list-style-type: none"> Solve problems using multiplication. 	<ul style="list-style-type: none"> Solving Problems with Multiplication Quiz Fluency in Multiplication Exam
	Dividing by One-digit Divisors	<ul style="list-style-type: none"> Divide dividends with up to four digits by a single-digit divisor. 	<ul style="list-style-type: none"> Dividing by One-digit Divisors Quiz
	Dividing by Two-digit Divisors	<ul style="list-style-type: none"> Divide dividends with up to four digits by two-digit divisors. 	<ul style="list-style-type: none"> Dividing by Two-digit Divisors Quiz Division Exam
	Partial Quotients with Powers of 10	<ul style="list-style-type: none"> Use partial quotients to solve long division problems. Divide dividends with up to four digits by two-digit divisors. 	<ul style="list-style-type: none"> Partial Quotients with Powers of 10 Quiz

Module	Lesson Title	Objectives	Assessments
	Other Partial Quotients	<ul style="list-style-type: none"> Use partial quotients to solve long division problems. Divide dividends with up to four digits by two-digit divisors. 	<ul style="list-style-type: none"> Other Partial Quotients Quiz
	Traditional Division	<ul style="list-style-type: none"> Divide dividends with up to four digits by two-digit divisors. Apply division strategies to problem solving. 	<ul style="list-style-type: none"> Traditional Division Quiz Division Strategies Exam
5	Adding Decimals	<ul style="list-style-type: none"> Add decimals to the hundredths. 	<ul style="list-style-type: none"> Adding Decimals Quiz
	Subtracting Decimals	<ul style="list-style-type: none"> Subtracting decimals to the hundredths. 	<ul style="list-style-type: none"> Subtracting Decimals Quiz
	Subtracting Thousandths	<ul style="list-style-type: none"> Subtracting decimals to the thousandths. 	<ul style="list-style-type: none"> Subtracting Thousandths Quiz Adding and Subtracting Decimals Exam
	Writing Money	<ul style="list-style-type: none"> Write dollars and cents as decimals. 	<ul style="list-style-type: none"> Writing Money Quiz
	Adding and Subtracting Money	<ul style="list-style-type: none"> Add and subtract money. 	<ul style="list-style-type: none"> Adding and Subtracting Money Quiz
	Money to Fractions	<ul style="list-style-type: none"> Convert decimals to fractions using money. 	<ul style="list-style-type: none"> Money to Fractions Quiz
	Money Applications	<ul style="list-style-type: none"> Apply decimal operations to real-world situations. 	<ul style="list-style-type: none"> Money Applications Quiz Money Exam

Module	Lesson Title	Objectives	Assessments
	Multiplying Hundredths	<ul style="list-style-type: none"> Multiply decimals to the hundredths. 	<ul style="list-style-type: none"> Multiplying Hundredths Quiz
	Multiplying Thousandths	<ul style="list-style-type: none"> Multiply decimals to the thousandths. 	<ul style="list-style-type: none"> Multiplying Thousandths Quiz
	Dividing Hundredths	<ul style="list-style-type: none"> Divide decimals to the hundredths. 	<ul style="list-style-type: none"> Dividing Hundredths Quiz
	Dividing Thousandths	<ul style="list-style-type: none"> Divide decimals to the thousandths. 	<ul style="list-style-type: none"> Dividing Thousandths Quiz Multiplying and Dividing Decimals Exam
6	Dividing Small Dividends	<ul style="list-style-type: none"> Divide a whole number into a dividend less than one. 	<ul style="list-style-type: none"> Dividing Small Dividends Quiz
	Dividing Decimals with Remainders	<ul style="list-style-type: none"> Divide a whole number into a dividend less than one with a remainder. 	<ul style="list-style-type: none"> Dividing Decimals with Remainders Quiz
	Dividing by 10s	<ul style="list-style-type: none"> Divide by 10, 100, and 1000. 	<ul style="list-style-type: none"> Dividing by 10s Quiz Dividing with Small Dividends Exam
	Write Equivalent Fractions	<ul style="list-style-type: none"> Write equivalent fractions. 	<ul style="list-style-type: none"> Write Equivalent Fractions Quiz
	Common Denominators	<ul style="list-style-type: none"> Learn how to find the common denominator when solving problems with fractions. 	<ul style="list-style-type: none"> Common Denominators Quiz

Module	Lesson Title	Objectives	Assessments
	Greatest Common Factors	<ul style="list-style-type: none"> Find the GCF. 	<ul style="list-style-type: none"> Greatest Common Factors Quiz
	Lowest Common Denominator	<ul style="list-style-type: none"> Use the LCM to write equivalent fractions. 	<ul style="list-style-type: none"> Lowest Common Denominator Quiz Uncommon Denominators Exam
	Adding and Subtracting with Like Denominators	<ul style="list-style-type: none"> Add and subtract fractions with like denominators. 	<ul style="list-style-type: none"> Adding and Subtracting with Like Denominators Quiz
	Adding Mixed Numbers with Like Denominators	<ul style="list-style-type: none"> Add and subtract mixed numbers with like denominators. 	<ul style="list-style-type: none"> Adding Mixed Numbers with Like Denominators Quiz
	Adding and Subtracting with Unlike Denominators	<ul style="list-style-type: none"> Add and subtract fractions with unlike denominators. Reduce fractions to simplest terms. 	<ul style="list-style-type: none"> Adding and Subtracting with Unlike Denominators Quiz
	Adding Mixed Numbers with Unlike Denominators	<ul style="list-style-type: none"> Add and subtract mixed numbers with unlike denominators. Reduce fractions to simplest terms. 	<ul style="list-style-type: none"> Adding Mixed Numbers with Unlike Denominators Quiz
	Subtracting Mixed Numbers	<ul style="list-style-type: none"> Subtract mixed numbers 	<ul style="list-style-type: none"> Subtracting Mixed Numbers Quiz Fraction Sums & Differences Exam