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.

Module	Lesson Title	Objectives
Module 1: Mathematical Operations	Introduction to Operations	• Evaluate expressions using the basic order of operations.
	Parentheses, Brackets and Braces	• Use symbols such as parentheses, brackets, or braces in numerical expressions. • Evaluate expressions using the basic order of operations.
	Translating Words to Math	• Translate words into numerical expressions.
	Translating Math to Words	• Translate mathematical expressions to words.
	Meaning of Mathematical Expressions	• Recognize the meanings of numerical expressions.
	Translating Mathematical Expressions	• Translate words to mathematical expressions. • Write simple expressions that include all operations. • Recognize the meanings of numerical expressions. • Evaluate mathematical expressions using order of operations.

Module	Lesson Title	Objectives
	Patterns and Sequences	• Create numerical patterns using different rules. • Identify patterns in a numerical sequence given a pattern rule. • Extend or duplicate a pattern in a number sequence. • Use a two-column table to record the inputs and outputs of the given numerical pattern.
	Relationships Between Sequences	• Identify and explain the relationships between corresponding terms of patterns.
	Ordered Pairs	• Generate and graph ordered pairs from the corresponding terms of sequences. • Plot ordered pairs on a coordinate plane.
	Patterns and Graphs	• Identify patterns and relationships between ordered pairs on a graph. • Make predictions based on trends identified in data on a graph. • Generate and graph a numerical pattern when given a rule in the form y = ax or y = x + a. • Recognize an additive and a multiplicative numerical pattern.
Module 2: Introduction to Decimals	Place Values In Whole Numbers	• Identify place value in multi-digit whole numbers. • Read and write whole numbers using words.
	Place Values in Decimals	• Identify place value in decimal numbers.
	Place Value Relationships	• Identify and describe relationships between numbers in adjacent place values.
	Exponents	• Write numbers in exponential, expanded, and standard forms.
	Powers of 10	• Identify and explain patterns of zeros when a number is multiplied by powers of 10. • Use whole-number exponents to denote powers of 10.

Module	Lesson Title	Objectives
	Multiplying Decimals with Powers of 10	• Identify and explain patterns of decimal-point placement when multiplying decimals by powers of 10.
	Dividing Whole Numbers by Powers of 10	• Identify and explain patterns of zeros when dividing by powers of 10.
	Dividing Decimals by Powers of 10	• Identify and explain patterns of decimal-point placement when dividing decimals by powers of 10.
Module 3: Estimating Decimals	Decimal Place Values	• Read and write decimal numbers in written forms to the thousandths place.
	Decimal Expanded Form	• Read decimal numbers in expanded and written forms, to the thousandths place. • Write decimal numbers using expanded and written forms, to the thousandths place.
	Comparing Decimals	• Compare two decimal numbers, to the thousandths place.
	Rounding Whole Numbers	• Round whole numbers to different places.
	Rounding Decimals	• Round decimals to the tenths, hundredths, and thousandths places.
	Estimating Sums and Differences	• Estimate operations by rounding decimal numbers.

Module	Lesson Title	Objectives
	Multiplication Using Compatible Numbers	• Estimate operations by using compatible numbers.
	Division Using Compatible Numbers	• Estimate quotients using compatible numbers.
Module 4: Multiplying and Dividing Multi-Digit Numbers	One Digit Multiplication	• Multiply multi-digit whole numbers by one-digit whole numbers with efficiency and flexibility.
	Multi-Digit Number Multiplication	• Multiply two-digit whole numbers by two-digit whole numbers with efficiency and flexibility. • Multiply multi-digit whole numbers with efficiency and flexibility.
	Word Problem Multiplication	• Apply multiplication skills to real-world problems.
	One-Digit Number Division	• Divide dividends with up to four digits by a single-digit divisor.
	Two-Digit Number Division	• Divide dividends with up to four digits by two-digit divisors.
	Partial Quotients	• Use partial quotients to solve long-division problems. • Divide dividends with up to four digits by two-digit divisors.
	Partial Quotient Remainders	• Apply their knowledge of partial quotients to problems with remainders. • Solve division problems with dividends with up to four digits and two-digit divisors.

Module	Lesson Title	Objectives
	More on Partial Quotients	• Use partial quotients to solve long-division problems. • Divide dividends with up to four digits by two-digit divisors.
	Partial Quotients vs. Long Division	• Divide dividends with up to four digits by two-digit divisors. • Apply division strategies to problem solving.
Module 5: Money and Decimal Operations	Decimal Addition	• Add decimals to the hundredths.
	Decimal Subtraction	• Subtract decimals to the hundredths.
	Decimal Subtraction: Thousandths Place	• Subtract decimals to the thousandths.
	Decimals: Money	• Write dollars and cents as decimals. • Explain the difference between gross income and net income.
	Adding and Subtracting Money	• Add and subtract money. • Identify the advantages and disadvantages of different methods of payment, including check, credit card, debit card, and electronic payments. • Develop a system for keeping and using financial records. • Describe actions that might be taken to balance a budget when expenses exceed income. • Balance a simple budget.
	Converting Money into Fractions	• Convert decimals to fractions using money amounts.
	Money Word Problems	• Apply decimal operations to real-world situations. • Define income tax, payroll tax, sales tax, and property tax.
	Multiplying Hundredth Place Decimals	• Multiply decimals to the hundredths.

Module	Lesson Title	Objectives
	Multiplying Thousandths-Place Decimals	• Multiply decimals to the thousandths.
	Dividing Hundredths-Place Decimals	• Divide decimals to the hundredths place.
	Dividing Thousandths-Place Decimals	• Divide decimals to the thousandths place.
Module 6: Fraction Operations	Small Dividend Division	• Divide a whole number into a dividend of less than one.
	Decimals as Remainders	• Complete division problems with decimals as remainders.
	Dividing Decimals By Powers of 10	• Divide by 10, 100, or 1,000.
	Equivalent Fractions	• Write equivalent fractions.
	Common Denominators	• Find the common denominator when solving problems involving fractions.
	Greatest Common Factor (GCFs)	• Find the GCF. • Simplify fractions.

Module	Lesson Title	Objectives
	Lowest Common Denominators (LCDs)	• Use the least common multiple to write equivalent fractions.
	Adding and Subtracting Fractions	• Add and subtract fractions with like denominators. • Add and subtract fractions with unlike denominators.
	Adding Mixed Numbers	• Add mixed numbers with like denominators. • Add mixed numbers with unlike denominators.
	Subtracting Mixed Numbers	• Subtract mixed numbers.