JC Schools 5th Grade Yearly Math Standards

Units	Priority Standards	Supporting Standards
Unit 1 Place Value, Multiplication & Expressions 20 days	**5.RA.B.3** Write, evaluate and interpret numeric expressions using the order of operations **5.RA.B.4** Translate written expressions into algebraic expressions **5.RA.C.5** Solve and justify multi-step problems involving variables, whole numbers, fractions and decimals **5.NBT.A.1** Read, write and identify numbers from billions to thousandths using number names, base ten numerals and expanded form **5.NBT.A.4** Evaluate the value of powers of 10 and understand the relationship to the place value system **5.NBT.A.7** Multiply multi-digit whole numbers and decimals to the hundredths place, and justify the solution	**5.NBT.A.3** Understand that in a multi-digit number, a digit represents 1/10 times what it would represent in the place to its left
Unit 2 Divide Whole Numbers	**5.RA.C.5** Solve and justify multi-step problems involving variables, whole numbers, fractions and decimals	

13 days	**5.NBT.A.8** Divide multi-digit whole numbers and decimals to the hundredths place using up to two-digit divisors and four-digit dividends, and justify the solution	
Unit 3 Add and Subtract Decimals 22 days	**5.NBT.A.1** Read, write and identify numbers from billions to thousandths using number names, base ten numerals and expanded form **5.NBT.A.2** Compare two numbers from billions to thousandths using the symbols >, =, <, and justify the solution **5.NBT.A.6** Add and subtract multi-digit whole numbers and decimals to the thousandths place, and justify the solution **5.NF.A.3** Compare and order-fractions and/or decimals to the thousandths place using the symbols >, <, = and justify the solution **5.RA.C.5** Solve and justify multi-step problems involving variables, whole numbers, fractions and decimals.	**5.NF.B.4** Estimate results of sums, differences and products with fractions and decimals to the thousandths. **5.NBT.A.5** Round numbers from billions to thousandths place.
Unit 4 Multiply Decimals 15 days	**5.NBT.A.7** Multiply multi-digit whole numbers and decimals to the hundredths place, and justify the solution **5.RA.C.5** Solve and justify multi-step problems involving variables, whole numbers, fractions and decimals	
Unit 5 Divide Decimals 13 days	**5.NBT.A.8** Divide multi-digit whole numbers and decimals to the hundredths place using up to two-digit divisors and four-digit dividends, and justify the solution	

	5.RA.C.5 Solve and justify multi-step problems involving variables, whole numbers, fractions and decimals	
Unit 6 Add and Subtract Fractions with Unlike Denominators 20 days	**5.NF.A.3** Compare and order fractions and/or decimals to the thousandths place using the symbols >, <, = and justify the solution **5.NF.B.6** Solve problems involving addition and subtraction of fractions and mixed numbers with unlike denominators, and justify the solution **5.RA.C.5** Solve and justify multi-step problems involving variables, whole numbers, fractions and decimals	**5.NF.A.1** Understand that parts of a whole can be expressed as fractions and/or decimals. **5.NF.A.2.** Convert decimals to fractions and fractions to decimals. **5.NF.B.4** Estimate results of sums, differences and products with fractions and decimals to the thousandths.
Unit 7 Multiply Fractions 15 days	**5.NF.B.7.a-c** Extend the concept of multiplication to multiply a fraction or whole number by a fraction a. Recognize the relationship between multiplying fractions and finding the areas of rectangles with fractional side lengths. b. Calculate and interpret the product of a fraction by a whole number and a whole number by a fraction. c. Calculate and interpret the product of two fractions less than one **5.RA.C.5** Solve and justify multi-step problems involving variables, whole numbers, fractions and decimals	**5.NF.B.5.a-d** Justify the reasonableness of a product when multiplying with fractions a. Estimate the size of the product based on the size of two factors b. Explain why multiplying a given number by a fraction greater than 1 results in a product larger than the given number c. Explain why multiplying a given number by a fraction less than 1 results in a product smaller than the given number d. Explain why multiplying the numerator and denominator by the same number is equivalent to multiplying the fraction by 1
Unit 8 Divide Fractions 12 days	**5.NF.B.8.a-b** Extend the concept of division to divide unit fractions and whole numbers by using visual fraction models and equations	

	a. Calculate and interpret the quotient of a unit fraction by a non-zero whole number b. Calculate and interpret the quotient of a whole number by a unit fraction	
Unit 9 Convert Units of Measurement 13 days	**5.GM.D.8** Convert measurements of capacity, length, and weight within a given measurement system **5.GM.D.9** Solve multi-step problems that require measurement conversions	
Unit 10 Geometry and Volume 16 days	**5.GM.A.2** Classify figures in a hierarchy based on properties **5.GM.A.3** Analyze and describe the properties of prisms and pyramids **5.GM.B.4.a,b** Understand the concept of volume and recognize that volume is measured in cubic units a. Describe a cube with edge length 1 unit as a "unit cube" and is said to have "one cubic unit" of volume and can be used to measure volume b. Understand that the volume of a right rectangular prism can be found by stacking multiple layers of the base **5.GM.B.5** Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for volume of right rectangular prisms with whole-number edge lengths	**5.GM.A1** Understand that attributes belonging to a category of figures also belong to all subcategories
Unit 11 Algebra: Patterns and Graphing 12 days	**5.DS.A.2** Create a line plot to represent a given or generated data set, and analyze the data to answer questions and solve problems, recognizing the outliers and generating the median **5.GM.C.7**	**5.DS.A.1** Create a line graph to represent a data set, and analyze the data to answer questions and solve problems **5.GM.C.6.a-d**

	Plot and interpret points in the first quadrant of the Cartesian coordinate plane	Define a first quadrant Cartesian coordinate system
	5.RA.A.1.a-d Investigate the relationship between two numeric patterns a. Generate two numeric patterns given two rules b. Translate two numeric patterns into two sets of ordered pairs c. Graph numeric patterns on the Cartesian coordinate plane d. Identify the relationship between two numeric patterns **5.RA.A.2** Write a rule to describe or explain a given numeric pattern	a. Represent the axes as scaled perpendicular number lines that both intersect at 0, the origin. b. Identify any point on the Cartesian coordinate plane by its ordered pair coordinates. c. Define the first number in an ordered pair as the horizontal distance from the origin. d. Define the second number in an ordered pair as the vertical distance from the origin.