	August/September	October	November	December
K-G	**Geometry** **3.03** Model and use directional and positional vocabulary. Pattern/ Position words **3.04** Complete simple spatial visualization tasks and puzzles.	**Geometry** **3.02** Compare geometric shapes (identify likenesses and differences). Pattern/ Position words	**1.01** Develop number sense for whole numbers through 30. a. Connect model, number word (orally), and number, using a variety of representations. b. Count objects in a set. c. Read and write numerals. d. Compare and order sets and numbers. e. Use ordinals (1st-10th).	**Number and Operation** f. Estimate quantities fewer than or equal to 10. **1.02** Share equally (divide) between two people; explain. **1.03** Solve problems and share solutions to problems in small groups.

1st Grade	Number and Operations	Data Analysis and Probability, Algebra	Measurement, Geometry, Number and Operations	Time, Number and operations
	1.01 Develop number sense for whole numbers through 99. a. Connect the model, number word, and number using a variety of representations.	**1.03** Develop fluency with single-digit addition and corresponding differences using strategies such as modeling, composing and decomposing quantities, using doubles, and making tens.	**1.04** Create, model, and solve problems that use addition, subtraction, and fair shares (between two or three).	**1.04** Create, model, and solve problems that use addition, subtraction, and fair shares (between two or three).
	b. Use efficient strategies to count the number of objects in a set.	**1.04** Create, model, and solve problems that use addition, subtraction, and fair shares (between two or three).	**2.01** For given objects:	**2.02** Develop an understanding of the concept of time.
	c. Read and write numbers.		a. Select an attribute (length, capacity, mass) to measure (use non-standard units).	a. Tell time at the hour and half-hour.
	d. Compare and order sets and numbers.		b. Develop strategies to estimate size.	b. Solve problems involving applications of time (clock and calendar).
	e. Build understanding of place value (ones, tens).		c. Compare, using appropriate language, with respect to the attribute selected.	
	f. Estimate quantities fewer than or equal to 100.		Draw, name, and recognize the plane shape	
	g. Recognize equivalence in sets and numbers 1-99.			
	1.02 Use groupings of 2's, 5's, and 10's with models and pictures to count collections of objects.			
	1.03 Develop fluency with single-digit addition and corresponding differences using strategies such as modeling, composing and decomposing quantities, using doubles, and making tens.			

1.04 Create, model, and solve problems that use addition, subtraction, and fair shares (between two or three).				

	Number and Operations	**Data Analysis and Probability**	**Number and Operations**	**Measurement**
2nd **Grade**	**1.01** Develop number sense for whole numbers through 999	**4.01** Collect, organize, describe and display data using Venn diagrams (three sets) and pictographs where symbols represent multiple units (2's, 5's, and 10's).	**1.04** Develop fluency with multi-digit addition and subtraction through 999 using multiple strategies.	**2.02** Tell time at the five-minute intervals.
	a. Connect model, number word, and number using a variety of representations. b. Read and write numbers.	**4.02** Conduct simple probability experiments; describe the results and make predictions.	a. Strategies for adding and subtracting numbers.	
	c. Compare and order. d. Rename e. Estimate	b. Estimation of sums and differences in appropriate situations.	**5.02** Write addition and subtraction number sentences to represent a problem; use symbols to represent unknown quantities.	
		c. Relationships between operations		
	Algebra **5.01** Identify, describe, translate, and extend repeating and growing patterns.			
	f. Use a variety of models to build understanding of place value (ones, tens, hundreds)..			
	1.06 Define and recognize odd and even numbers. **1.01** Develop number sense for whole numbers through 9,999. a. Connect model, number word, and number using a variety of representations. b. Build understanding of place value (ones through thousands).			

3rd Grade	Number and Operations	Number and Operations	Number and Operations	Number and Operations
	1.01 Develop number sense for whole numbers through 9,999.	**1.02** Develop fluency with multi-digit addition and subtraction through 9,999 using:	**1.03** Develop fluency with multiplication from 1x1 to 12x12 and division up to two-digit by one-digit numbers using:	**1.05** Use area or region models and set models of fractions to explore part-whole relationships.
	a. Connect model, number word, and number using a variety of representations. b. Build understanding of place value (ones through thousands).	a. Strategies for adding and subtracting numbers.	a. Strategies for multiplying and dividing numbers.	a. Represent fractions concretely and symbolically (halves, fourths, thirds, sixths, eighths).
	c. Compare and order.	b. Estimation of sums and differences in appropriate situations.	b. Estimation of products and quotients in appropriate situations.	b. Compare and order fractions (halves, fourths, thirds, sixths, eighths) using models and benchmark numbers (zero, one-half, one); describe comparisons.
	1.06 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.	c. Relationships between operations.	c. Relationships between operations.	
		1.04 Use basic properties (identity, commutative, associative, order of operations) for addition, subtraction, multiplication, and division.	**1.06** Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.	
		1.06 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.	**Algebra**	
		1.03 Develop fluency with multiplication from 1x1 to 12x12 and division up to two-digit by one-digit numbers using:	**5.02** Extend and find missing terms of repeating and growing patterns.	

Data Analysis and Probability

4.01 Collect, organize, analyze, and display data (including circle graphs and tables) to solve problems.

Algebra

5.01 Describe and extend numeric and geometric patterns.

5.03 Use symbols to represent unknown quantities in number sentences.

5.04 Find the value of the unknown in a number sentence.

4th Grade	Number and Operations	Data Analysis and probability	Number and Operations	Number and Operations
	1.01 Develop number sense for rational numbers 0.01 through 99,999. a. Connect model, number word, and number using a variety of representations. b. Build understanding of place value (hundredths through ten thousands). c. Compare and order rational numbers. d) Make estimates of rational numbers in appropriate situations.	**4.01** Collect, organize, analyze, and display data (including line graphs and bar graphs to solve problems. **4.02** Describe the distribution of data using median, range and mode. **4.03** Solve problems by comparing two sets of related data. ## Algebra	**1.02** Develop fluency with multiplication and division a. Two-digit by two-digit multiplication (larger numbers with calculator). c. Strategies for multiplying and dividing numbers. .Estimation of products and quotients in appropriate situations.	b. Up to three-digit by two-digit division (larger numbers with calculator). c. Strategies for multiplying and dividing numbers. .Estimation of products and quotients in appropriate situations. **1.05** Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.
	1.03 Solve problems using models, diagrams, and reasoning about fractions and relationships among fractions involving halves, fourths, eighths, thirds, sixths, twelfths, fifths, tenths, hundredths, and mixed numbers.	**5.02** Translate among symbolic, numeric, verbal, and pictorial representations of number relationships.	**1.05** Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.	
	1.04 Develop fluency with addition and subtraction of non-negative rational numbers with like denominators, including decimal fractions through hundredths. a. Develop and analyze strategies for adding and subtracting numbers. b. Estimate sums and differences. c. Judge the reasonableness of solutions.	**5.03** Verify mathematical relationships using: a. Models, words, and numbers. b. Order of operations and the identity, commutative, associative, and distributive properties.		

1.05 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.				

5th	**Number and Operations**	**Number and Operations**	**Number and Operations**	
				Algebra
Grade	**1.01** Develop number sense for rational numbers 0.001 through 999,999.	**1.01** Develop number sense for rational numbers 0.001 through 999,999.	**1.01** Develop number sense for rational numbers 0.001 through 999,999.	**5.01** Describe, extend, and generalize numeric and geometric patterns using tables, graphs, words, and symbols.
	a. Connect model, number word, and number using a variety of representations.	a. Connect model, number word, and number using a variety of representations.	a. Connect model, number word, and number using a variety of representations.	**5.02** Use algebraic expressions, patterns, and one-step equations and inequalities to solve problems.
	b. Build understanding of place value (thousandths through hundred thousands).	b. Build understanding of place value (thousandths through hundred thousands).	b. Build understanding of place value (thousandths through hundred thousands).	
				Geometry
	c. Compare and order rational numbers.	c. Compare and order rational numbers.	c. Compare and order rational numbers.	**5.03** Identify, describe, and analyze situations with constant or varying rates of change.
	d. Make estimates of rational numbers in appropriate situations.	d. Make estimates of rational numbers in appropriate situations.	d. Make estimates of rational numbers in appropriate situations.	
	1.02 Develop fluency in adding and subtracting non-negative rational numbers (halves, fourths, eighths; thirds, sixths, twelfths; fifths, tenths, hundredths, thousandths; mixed numbers).	**1.02** Develop fluency in adding and subtracting non-negative rational numbers (halves, fourths, eighths; thirds, sixths, twelfths; fifths, tenths, hundredths, thousandths; mixed numbers).	**1.02** Develop fluency in adding and subtracting non-negative rational numbers (halves, fourths, eighths; thirds, sixths, twelfths; fifths, tenths, hundredths, thousandths; mixed numbers).	**3.01** Identify, define, describe, and accurately represent triangles, quadrilaterals, and other polygons.
	a. Develop and analyze strategies for adding and subtracting numbers. b. Estimate sums and differences.	a. Develop and analyze strategies for adding and subtracting numbers. b. Estimate sums and differences.	a. Develop and analyze strategies for adding and subtracting numbers. b. Estimate sums and differences.	**3.01** Identify, define, describe, and accurately represent triangles, quadrilaterals, and other polygons. a. Sum of the measures of interior angles.
	c. Judge the reasonableness of solutions.	c. Judge the reasonableness of solutions.	c. Judge the reasonableness of solutions.	b. Lengths of sides and diagonals.

1.03 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.	**1.03** Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.	**1.03** Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.	c. Parallelism and perpendicularity of sides and diagonals. **3.03** Classify plane figures according to types of symmetry (line, rotational). **3.04** Solve problems involving the properties of triangles, quadrilaterals, and other polygons.
Data Analysis and Probability	**Data Analysis and Probability**	**Algebra**	
4.01 Collect, organize, analyze, and display data (including stem-and-leaf plots) to solve problems.	**4.01** Collect, organize, analyze, and display data (including stem-and-leaf plots) to solve problems.	**5.01** Describe, extend, and generalize numeric and geometric patterns using tables, graphs, words, and symbols.	a. Sum of the measures of interior angles.
4.02 Compare and contrast different representations of the same data; discuss the effectiveness of each representation.	**4.02** Compare and contrast different representations of the same data; discuss the effectiveness of each representation.	**5.02** Use algebraic expressions, patterns, and one-step equations and inequalities to solve problems.	b. Lengths of sides and diagonals.
4.03 Solve problems with data from a single set or multiple sets of data using median, range, and mode.	**4.03** Solve problems with data from a single set or multiple sets of data using median, range, and mode.	**5.03** Identify, describe, and analyze situations with constant or varying rates of change.	c. Parallelism and perpendicularity of sides and diagonals.

	Number and Operations	**Number and Operations**	**Number and Operations**	**Number and Operations**
6th **Grade**	**1.04** Develop fluency in addition, subtraction, multiplication, and division of non-negative rational numbers. **1.05** Develop fluency in the use of factors, multiples, exponential notation, and prime factorization. **1.06** Use exponential, scientific, and calculator notation to write very large and very small numbers. **1.07** Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil. **Measurement** **2.01** Estimate and measure length, perimeter, area, angles, weight, and mass of two- and three-dimensional figures, using appropriate tools. **2.02** Solve problems involving perimeter/circumference and area of plane figures. **Data Analysis and Probability**	**1.03** Compare and order rational numbers. **1.04** Develop fluency in addition, subtraction, multiplication, and division of non-negative rational numbers. a. Analyze computational strategies. b. Describe the effect of operations on size. c. Estimate the results of computations. d. Judge the reasonableness of solutions. **1.06** Use exponential, scientific, and calculator notation to write very large and very small numbers. **Measurement**	**1.03** Compare and order rational numbers. **1.04** Develop fluency in addition, subtraction, multiplication, and division of non-negative rational numbers. a. Analyze computational strategies. b. Describe the effect of operations on size. c. Estimate the results of computations. Judge the reasonableness of solutions. **1.05** Develop fluency in the use of factors, multiples, exponential notation, and prime factorization. **1.06** Use exponential, scientific, and calculator notation to write very large and very small numbers.	**1.07** Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.

4.06 Design and conduct experiments or surveys to solve problems; report and analyze results.

Algebra

5.02 Use and evaluate algebraic expressions.

2.01 Estimate and measure length, perimeter, area, angles, weight, and mass of two- and three-dimensional figures, using appropriate tools.

2.02 Solve problems involving perimeter/circumference and area of plane figures.

3.02 Identify the radius, diameter, chord, center, and circumference of a circle; determine the relationships among them.

3.03 Transform figures in the coordinate plane and describe the transformation.

3.04 Solve problems involving geometric figures in the coordinate plane.

Algebra

5.02 Use and evaluate algebraic expressions.

1.07 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.

Algebra	**Number and Operations** **1.01** Write equivalent forms of algebraic expressions to solve problems. a. Apply the laws of exponents. b. Operate with polynomials. Factor polynomials. **3.03** Create linear models for sets of data to solve problems. a. Interpret constants and coefficients in the context of the data. b. Check the model for goodness-of-fit and use the model, where appropriate, to draw conclusions or make predictions.	**Number and Operations** **1.01** Write equivalent forms of algebraic expressions to solve problems. a. Apply the laws of exponents. b. Operate with polynomials. Factor polynomials. 1.03 Model and solve problems using direct variation	**Number and Operations** **1.01** Write equivalent forms of algebraic expressions to solve problems. a. Apply the laws of exponents. b. Operate with polynomials. Factor polynomials. 1.03 Model and solve problems using direct variation **Measurement** 2.01 Find the lengths and midpoints of segments to solve problems. **2.02** Use the parallelism or perpendicularity of lines and segments to solve problems. **Geometry** **3.03** Create linear models for sets of data to solve problems.	**Number and Operations** **1.01** Write equivalent forms of algebraic expressions to solve problems. a. Apply the laws of exponents. b. Operate with polynomials. Factor polynomials. **Measurement** **2.02** Use the parallelism or perpendicularity of lines and segments to solve problems. **Geometry** **3.03** Create linear models for sets of data to solve problems. **Data Analysis and Probability** **4.01** Use linear functions or inequalities to model and solve problems; justify results.

a. Interpret constants and coefficients in the context of the data.

b.   Check the model for goodness-of-fit and use the model, where appropriate, to draw conclusions or make predictions.

Data Analysis and Probability

4.01 Use linear functions or inequalities to model and solve problems; justify results.
a. Solve using tables, graphs, and algebraic properties.

b. Interpret constants and coefficients in the context of the problem.

a. Solve using tables, graphs, and algebraic properties.

b. Interpret constants and coefficients in the context of the problem.

4.03   Describe how the mean, median, mode, range, frequency distribution, and inter-quartile range of a set of data affect its graph.

Geometry				
Number and Operations **1.02** Use length, area, and volume of geometric figures to solve problems. Include arc length, area of sectors of circles; lateral area, surface area, and volume of three-dimensional figures; and perimeter, area, and volume of composite figures. **1.03** Use length, area, and volume to model and solve problems involving probability. **Measurement** **2.01** Use logic and deductive reasoning to draw conclusions and solve problems. **2.02** Apply properties, definitions, and theorems of angles and lines to solve problems and write proofs. **2.03** Apply properties, definitions, and theorems of two-dimensional figures to solve problems and write proofs: a. Triangles. b. Quadrilaterals.	**Number and Operations** **1.02** Use length, area, and volume of geometric figures to solve problems. Include arc length, area of sectors of circles; lateral area, surface area, and volume of three-dimensional figures; and perimeter, area, and volume of composite figures. **2.01** Use logic and deductive reasoning to draw conclusions and solve problems. **2.02** Apply properties, definitions, and theorems of angles and lines to solve problems and write proofs. **2.03** Apply properties, definitions, and theorems of two-dimensional figures to solve problems and write proofs: a. Triangles. b. Quadrilaterals. c. Other polygons. D. Circles	**Number and Operations** **1.03** Use length, area, and volume to model and solve problems involving probability. **Measurement** **2.01** Use logic and deductive reasoning to draw conclusions and solve problems. **2.02** Apply properties, definitions, and theorems of angles and lines to solve problems and write proofs. **2.03** Apply properties, definitions, and theorems of two-dimensional figures to solve problems and write proofs: a. Triangles. b. Quadrilaterals.	**Number and Operations** **1.01** Use the trigonometric ratios to model and solve problems involving right triangles. **1.02** Use length, area, and volume of geometric figures to solve problems. Include arc length, area of sectors of circles; lateral area, surface area, and volume of three-dimensional figures; and perimeter, area, and volume of composite figures. **Measurement** **2.01** Use logic and deductive reasoning to draw conclusions and solve problems. **2.02** Apply properties, definitions, and theorems of angles and lines to solve problems and write proofs. **2.03** Apply properties, definitions, and theorems of two-dimensional figures to solve problems and write proofs: a. Triangles.

c. Other polygons.	**2.04** Develop and apply properties of solids to solve problems.	c. Other polygons.	b. Quadrilaterals.
D. Circles	**2.04** Develop and apply properties of solids to solve problems.	D. Circles	c. Other polygons.
2.04 Develop and apply properties of solids to solve problems.		D. Circles	

| Pre-Algebra | **Number and Operations**
1.01 Develop number sense for the real numbers.

a. Define and use irrational numbers.
b. Compare and order.

Use estimates of irrational numbers in appropriate situations.

1.02 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.

Data Analysis and Probability | **Number and Operations**
1.01 Develop number sense for the real numbers.

a. Define and use irrational numbers.
b. Compare and order.

Use estimates of irrational numbers in appropriate situations.

1.02 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.

2.01 Determine the effect on perimeter, area or volume when one or more dimensions of two- and three-dimensional figures are changed. | **Number and Operations**
1.01 Develop number sense for the real numbers.

a. Define and use irrational numbers.
b. Compare and order.

Use estimates of irrational numbers in appropriate situations.

1.02 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.
2.02 Apply and use concepts of indirect measurement. | **Geometry**
3.03 Identify, predict, and describe dilations in the coordinate plane.

Algebra
5.03 Solve problems using linear equations and inequalities; justify symbolically and graphically.
5.04 Solve problems using the inverse relationships of addition and subtraction, multiplication and division, squares and square roots, and cubes and cube roots |

4.01 Collect, organize, analyze, and display data (including scatterplots) to solve problems. **4.02** Approximate a line of best fit for a given scatterplot; explain the meaning of the line as it relates to the problem and make predictions.	**Geometry** **3.02** Apply geometric properties and relationships, including the Pythagorean theorem, to solve problems	**4.01** Collect, organize, analyze, and display data (including scatterplots) to solve problems. **Algebra** **5.03** Solve problems using linear equations and inequalities; justify symbolically and graphically.	
Algebra **5.01** Develop an understanding of function.	**Algebra** **5.01** Develop an understanding of function.	**5.04** Solve problems using the inverse relationships of addition and subtraction, multiplication and division, squares and square roots, and cubes and cube roots.	
a) Translate among verbal, tabular, graphic, and algebraic representations of functions.	a) Translate among verbal, tabular, graphic, and algebraic representations of functions.		
b) Identify relations and functions as linear or nonlinear. c) Find, identify, and interpret the slope (rate of change) and intercepts of a linear relation.	b) Identify relations and functions as linear or nonlinear. c) Find, identify, and interpret the slope (rate of change) and intercepts of a linear relation.		

d) Interpret and compare properties of linear functions from tables, graphs, or equations. **5.03** Solve problems using linear equations and inequalities; justify symbolically and graphically. **5.04** Solve problems using the inverse relationships of addition and subtraction, multiplication and division, squares and square roots, and cubes and cube roots.	d) Interpret and compare properties of linear functions from tables, graphs, or equations. **5.03** Solve problems using linear equations and inequalities; justify symbolically and graphically. **5.04** Solve problems using the inverse relationships of addition and subtraction, multiplication and division, squares and square roots, and cubes and cube roots.		