Math Common Core Standards (AIMSWEB)

Kindergarten	First Grade	Second Grade
Counting and Cardinality		
Know number names and the count sequence. Count 0-100 by ones and tens.		
Count to tell the number of objects.		
Compare numbers. (Greater than, less than or equal to)		
Operations and Algebraic Thinking Common Core Cluster		
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	Represent and solve problems involving addition and subtraction.	Represent and solve problems involving addition and subtraction.
	Understand and apply properties of operations and the relationship between addition and subtraction.	
	Add and subtract within 20.	Add and subtract within 20.
	Work with addition and subtraction equations.	Work with equal groups of objects to gain foundations for *multiplication*.
Number and Operations in Base Ten		
Work with numbers 11–19 to gain foundations for place value.	Extend the counting sequence.	
	Understand place value.	Understand place value.
	Use place value understanding and properties of operations to add and subtract.	Use place value understanding and properties of operations to add and subtract.
Measurement and Data		
Describe and compare measurable attributes.	Measure lengths indirectly and by iterating length units.	Measure and estimate lengths in *standard* units.
Classify objects and count the number of objects in each category.		Relate addition and subtraction to length.
	Tell and write time.	
	Represent and interpret data.	Represent and interpret data.
Geometry		
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).	Reason with shapes and their attributes.	Reason with shapes and their attributes.
Analyze, compare, create, and compose shapes.		

Math Common Core Standards

Third Grade	Fourth Grade	Fifth Grade
Operations and Algebraic Thinking Common Core Cluster		
Represent and solve problems involving multiplication and *division*.	Use the four operations with whole numbers to solve problems. (addition, subtraction, multiplication, division)	Write and interpret numerical expressions. *Mathematically proficient students communicate precisely by engaging in discussion about their reasoning using appropriate mathematical language. The terms students should learn to use with increasing precision with this cluster are: parentheses, brackets, braces, numerical expressions.*
Understand properties of multiplication and the relationship between multiplication and division.	Gain familiarity with factors and multiples.	
Multiply and divide within 100.	Generate and analyze patterns.	Analyze patterns and relationships. *Mathematically proficient students communicate precisely by engaging in discussion about their reasoning using appropriate mathematical language.* *The terms students should learn to use with increasing precision with this cluster are: numerical patterns, rules, ordered pairs, coordinate plane.*
Solve problems involving the four operations, and identify and explain patterns in arithmetic.		
Number and Operations in Base Ten		
Use place value understanding and properties of operations to perform multi-digit arithmetic.*1 1 A range of algorithms may be used.*	Generalize place value understanding for multi-digit whole numbers. *1Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000. Mathematically proficient students communicate precisely by engaging in discussion about their reasoning using appropriate mathematical language. The terms students should learn to use with increasing precision with this cluster are: place value, greater than, less than, equal to, ‹, ›, =, comparisons/compare, round*	Understand the place value system. *Mathematically proficient students communicate precisely by engaging in discussion about their reasoning using appropriate mathematical language. The terms students should learn to use with increasing precision with this cluster are: place value, decimal, decimal point, patterns, multiply, divide, tenths,thousands, greater than, less than, equal to, ‹, ›, =, compare/comparison, round*
	Use place value understanding and properties of operations to perform multi-digit arithmetic. *1Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.*	Perform operations with multi-digit whole numbers and with decimals to hundredths. *Mathematically proficient students communicate precisely by engaging in discussion about their reasoning using appropriate mathematical language. The terms students should learn to use with increasing precision with this cluster are: multiplication/multiply, division/divide, decimal, decimal point, tenths, hundredths, products, quotients, dividends, rectangular arrays, area models, addition/add, subtraction/subtract,*

		(properties)-rules about how numbers work, reasoning
Develop understanding of fractions as numbers.	Extend understanding of fraction equivalence and ordering. *Students develop understanding of fraction equivalence and operations with fractions. They recognize that two different fractions can be equal (e.g., 15/9 = 5/3), and they develop methods for generating and recognizing equivalent fractions.*	Use equivalent fractions as a strategy to add and subtract fractions. *Students apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators as equivalent calculations with like denominators. They develop fluency in calculating sums and differences of fractions, and make reasonable estimates of them.*
	Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. *Students extend previous understandings about how fractions are built from unit fractions, composing fractions from unit fractions, decomposing fractions into unit fractions, and using the meaning of fractions and the meaning of multiplication to multiply a fraction by a whole number.*	Apply and extend previous understandings of multiplication and division to multiply and divide fractions. *Mathematically proficient students communicate precisely by engaging in discussion about their reasoning using appropriate mathematical language. The terms students should learn to use with increasing precision with this cluster are: fraction, numerator, denominator, operations, multiplication/multiply, division/divide, mixed numbers, product, quotient, partition, equal parts, equivalent, factor, unit fraction, area, side lengths, fractional sides lengths, scaling, comparing*
	Understand decimal notation for fractions, and compare decimal fractions.	
Measurement and Data		
Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. *Mathematically proficient students communicate precisely by engaging in discussion about their reasoning using appropriate mathematical language. The terms students should learn to use with increasing precision with this cluster are: measure, metric, customary, convert/conversion, relative size, liquid volume, mass, length, distance, kilometer (km), meter (m), centimeter (cm), millimeter (mm), kilogram (kg), gram (g), liter (L), milliliter (mL), inch (in), foot (ft), yard (yd), mile (mi), ounce (oz), pound (lb), cup (c), pint (pt), quart (qt), gallon (gal), time, hour, minute, second, equivalent, operations, add, subtract, multiply, divide, fractions, decimals, area, perimeter*	Convert like measurement units within a given measurement system. *Mathematically proficient students communicate precisely by engaging in discussion about their reasoning using appropriate mathematical language. The terms students should learn to use with increasing precision with this cluster are: conversion/convert, metric and customary measurement* *From previous grades: relative size, liquid volume, mass, length, kilometer (km), meter (m), centimeter (cm), kilogram (kg), gram (g), liter (L),milliliter (mL), inch (in), foot (ft), yard (yd), mile (mi), ounce (oz), pound (lb), cup (c), pint (pt), quart (qt), gallon (gal), hour, minute, second*
Represent and interpret data.	Represent and interpret data.	Represent and interpret data.
Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	Geometric measurement: understand concepts of angle and measure angles.	Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.		

Geometry		
Reason with shapes and their attributes. *Students describe, analyze, and compare properties of two dimensional shapes. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.*	Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	
		Graph points on the coordinate plane to solve real-world and mathematical problems. *Mathematically proficient students communicate precisely by engaging in discussion about their reasoning using appropriate mathematical language. The terms students should learn to use with increasing precision with this cluster are: coordinate system, coordinate plane, first quadrant, points, lines, axis/axes, x-axis, y-axis, horizontal, vertical, intersection of lines, origin, ordered pairs, coordinates, x-coordinate, y-coordinate*
		Classify two-dimensional figures into categories based on their properties. *Mathematically proficient students communicate precisely by engaging in discussion about their reasoning using appropriate mathematical language. The terms students should learn to use with increasing precision with this cluster are: attribute, category, subcategory, hierarchy, (properties)-rules about how numbers work, two dimensional* *From previous grades: polygon, rhombus/rhombi, rectangle, square, triangle, quadrilateral, pentagon, hexagon, cube, trapezoid, half/quarter circle, circle, kite*