

Academic Content Standard (ACS) is a statement the describes what students should know and be able to do by the end of each grade level.

Grade	ACS Category	SubCategory
Kindergarten	Reading Numbers	Read numbers to 20
	Comparison	Comapre and order numbers to 10
	Counting	Count by 1s, 5s and 10s to 100
		Identify ordinal position to fourth
	Story Problems	Act out addition and subtraction stories
	Money	Identify and count pennies, nickels and dimes
	Geometry	Cover designs using tangrams
		Copy congruent geoboard designs
		Identify a circle, triangle, rectangle and square
	Patterns	Identify, read and extend repeating and continuing shape patterns
	Measurement	Compare objects by length
		Measure the length of objects using non-standard units
	Time and Calendar	Identify the days of the week
Read time to the nearest hour		
Data Analysis	Create a real graph	
	Sort objects and identify a sorting rule	

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1st Grade	Numeration	Read, write, compare and order numbers to 100
	Addition	Master basic addition facts
		Add 10 to a two-digit number
	Subtraction	Master basic subtraction facts with minuends through 10
		Subtract 10 from a two-digit number
	Story Problems	Draw pictures and write number sentences for addition and subtraction stories
	Money	Evaluate combinations of pennies, nickels and dimes less than \$.50; write amount using cent sign
	Number Patterns	Identify even and odd numbers
		Count by 1s, 2s, 5s, 10s, and 100s; and by 10s from any single-digit number
	Geometry	Identify these geometric solids: cone, sphere, cylinder and cube
Measurement	Measure and draw line segments using inches or centimeters	
Time and Calendar	Read and represent time to the half hour	
	Identify the day of the week, month, date, year, yesterday, and tomorrow	
Data Analysis	Create and read a bar graph	

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Grade	ACS Category	SubCategory
2nd grade	Number Sense and Numeration	Read, write, compare and order numbers to 1000
		Identify place value to the hundreds
	Addition	Add two-digit numbers with and without regrouping
		Add three or more single-digit numbers
	Subtraction	Master basic subtraction facts through 20
		Subtract two-digit numbers with and without renaming
	Story Problems	Draw pictures, use models and make arrays to illustrate multiplication story problems
		Write number sentences for arrays
	Multiplication	Count by 2s, 3s, 4s, 5s, and 25s
		Multiply single-digit numbers by 1, 2, 3, 4, and 5
	Fractions	Name and shade fractional parts of a whole
		Find half a set
	Money	Evaluate coin combinations (up to \$1.50) and write amount using dollar sign and cent symbol
		Show a given amount of money (up to \$1.50) using coins
	Measurement	Measure and draw line segments to 1/2 inch
		Measure and draw line segments using centimeters
		Measure using feet and inches
	Time	Read and represent time to five-minute intervals
	Use a.m. and p.m. and identify noon and midnight	
	Solve problems involving elapsed time	
Data Analysis	Create and read a bar graph	
	Answer questions from a graph	

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Grade	ACS Category	SubCategory
3rd grade	Addition and Subtraction	Add three or more multi-digit numbers
		Add two-digit numbers with and without regrouping using mental computation
		Subtract three-digit numbers
		Check subtraction answers with addition
	Multiplication	Master basic multiplication facts
		Multiply single-digit numbers by multiples of 10, 100, and 1000
	Division	Master basic division facts
		Check answers using multiplication
	Number Sense and Numeration	Identify place value to the thousands
		Locate integers on a number line
	Fractions	Compare and order unit fractions
		Represent and write mixed numbers
		Write hundredths in fractional and decimal form
	Money	Add money with dollar sign and decimal point up to \$99,999.99
		Make change for \$1.00
	Geometry	Draw and name line segments
		Identify and draw parallel and perpendicular lines
		Identify right, acute and obtuse angles
	Perimeter and Area	Estimate, measure and compare perimeter using inches and centimeters
		Estimate, measure and compare area using square inches and square centimeters
Measurement	Identify and use measuring cups and spoons	
	Measure temperature using the Fahrenheit and Celsius scales	
Data Analysis	Read and answer questions from a chart and a map	
	Conduct an experiment and record the results	

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4th grade	Multiplication and Division	Multiply three digit by two digit numbers with regrouping
		Divide two or three digit numbers by two digit numbers, with or without remainder
		Divide four digit numbers by one digit numbers, with or without remainder
	Rounding and Estimating	Round whole numbers through thousands to the nearest 10, 100, or 1000
		Estimate the products of two digit factors
		Estimate the sums of three digit numbers
	Decimal Equivalency and Place Value	Change decimals with tenths or hundredths to an equivalent fraction or mixed number
		Write mixed numbers (with tenths or hundredths as denominators) as decimals
		Write decimal numbers to the hundredths in words
	Addition and Subtraction of Decimals	Addition of decimals with different number of places, aligning place value
		Subtraction of decimals with different numbers of places by aligning place value and filling in
	Money	Write dollars and cents in correct form from words
		Write two forms of money into words
		Add and subtract money
	Data Analysis	Read and answer question from line graphs and circle graphs
	Geometry	Find the perimeter of different polygons when given a picture with sides labelled
		Find the area of a rectangle
	Number Line	Read fractions and mixed numbers on the number line
		Read decimal numbers to the tenths on the number line
	Measurement	Measure lengths to the nearest millimeter or 1/4 inch
		Know the equivalencies between: metric units of length
Know the equivalencies between: U.S. units of length		
Know the equivalencies between: metric units of mass		
Know the equivalencies between: U.S. units of weight		
Know the equivalencies between: metric liquid measure		
Roman Numerals	Write Roman numerals through 39	
	Read Roman numerals through the thousands	

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Grade	ACS Category	SubCategory
5th grade	Whole Number Place Value	Recognize the place value of digits through millions
		Write numbers through millions into words and digits
		Write whole numbers in expanded notation through the thousands
	Average	Make equal groups to find an average
		Compute an average of two or more numbers
	Equivalent Fractions	Compare fractions by finding a common denominator
		Convert mixed numbers to improper fractions and improper fractions to mixed numbers
		Reduce fractions and mixed numbers to lowest terms
	Addition and Subtraction of Fractions	Add fractions or mixed numbers with unlike denominators; regrouping or reducing as necessary
		Subtract fractions or mixed numbers from fractions, mixed or whole numbers; renaming, regrouping or
	Multiplication and Division of Fractions	Multiply a fraction by a fraction or whole number
		Divide a fraction by a fraction or a whole number
	Elementary Number Theory	List all factors of whole numbers up through 40
		Find the greatest common factor for pairs of numbers less than 40
		Find the least common multiple for pairs of numbers less than 40
	Multiplication and Division of Decimals	Multiply a decimal number by a decimal, whole number or power of ten
		Divide a decimal number by a decimal, whole number or power of ten
	Rounding and Estimation	Estimate arithmetic answers for problems with addition, subtraction, multiplication and division
		Round mixed numbers to the nearest whole number
		Round decimal numbers to the nearest whole number
		Round dollars and cents to the nearest whole dollar
Solid Geometry	Recognize and name the following shapes: cube, triangular prism, rectangular prism, cylinder, cone,	
	Number the faces of different prisms and pyramids	
Measurement	Convert units of length within the U.S. System or Metric System	
	Simplify mixed measures of time, length and mass (weight)	

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Grade	ACS Category	SubCategory
6th grade	Operations with Fractions	Add three or more fractions or mixed numbers with like or unlike denominators
		Multiply three or more fractions or mixed numbers; cancelling out common factors before
		Divide mixed numbers
	Fraction, Decimal, and Percent Equivalents	Write fractions to decimals to percents
	Ratio and Proportion	Write ratios and solve simple proportions
	Exponents and Roots	Indicate repeated multiplication with exponents
		Find square roots of perfect squares up through 400; estimate (between two whole numbers) the
	Primes and Composite Numbers	Identify numbers through 100 as prime or composite
		Find factors and prime factorization of numbers up through 100
		Identify and use divisibility rules to determine the single digit factors of larger numbers
	Angles	Identify angles as acute, right, obtuse, or straight
		Measure angles using a protractor
	Triangles	Classify triangles by angles and sides
		Identify similar and congruent triangles
		Know that the sum of the angles in a triangle is 180 degrees and find the missing measurement when
Geometric Formulas	Identifying formulas for the perimeter and area of a square, rectangle, parallelogram, triangle, and	
	Solve problems involving perimeter and area of above geometric shapes	
Solid Geometry	Compute the volume and the surface area of a cube and a rectangular prism	
Graphing	Identify rectangular coordinates of points in the coordinate plane	

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7th grade	Operations with Integers	Add, subtract, multiply, and divide signed numbers
		Change a subtraction problem with signed numbers to algebraic addition
		Evaluate expressions with signed numbers using the order of operations
	Symbols of Inclusion	Evaluate expressions that have symbols of absolute value, parentheses, braces, brackets, and
	Statistics	Identify mean, median, and mode from a given set of data
		Find overall average from two given averages of different weight
		Compute missing number in a set with a given average
	Scientific Notation	Express both large and small numbers in scientific notation
		Find the product of numbers in scientific notation by multiplying the factors and adding the
	Probability	Compute simple probability of independent events
		Express permutations as factorials (for large numbers) or in standard form
	Solid Geometry	Find the lateral and total surface area of right circular cylinders, triangular and rectangular
		Find the volume of cylinders and prisms
	Algebraic Expressions	Evaluate with substitution for variables and symbols of inclusion
		Simplify by combining like terms
		Simplify using the distributive property
	Algebraic Equations	Solve equations using both additive and multiplicative property of equality
		Solve advanced equations with variables in multiple terms on each side of the equation
		Write equations from word problems and solve, checking to verify solution
	Exponents and Roots	Calculate exponents and roots of signed numbers and fractions
		Evaluate expressions with roots and exponents
Estimating square roots to the nearest tenth and higher order roots to the nearest whole number		
Ratio, Proportion, and Percent	Solve word problems with advanced ratios involving totals	
	Solve word problems with percent (to find the whole, part, or percent)	
	Use cross products to solve proportions with fractions or mixed numbers	

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8th grade	Conversion by Unit Multipliers	Convert from U.S. to metric and metric to U.S. units of length, area, and volume
	Distance Formula	Write and solve equations for word problems with uniform motion and equal distances, the sum of
	Exponents	Simplify products, quotients and powers of exponential expressions
		Calculate exponential increases using the Y to the X calculator key
	Radical Expressions	Multiply and simplify radical expressions
		Simplify radical fractions by rationalizing the denominator
	Polynomial Expressions	Factor: the difference of squares, simple trinomials, trinomials with common factors or common
		Divide polynomials
	Rational Expressions	Add, subtract, multiply, and divide rational expressions
		Simplify complex algebraic fractions
		Add, multiply, and divide rational expressions with factorable denominators and simplify
		Solve abstract rational equations
	Linear Equations	Graph linear equations by rearranging into slope-intercept form
		Categorize consistent, inconsistent, and independent equations
		Find linear equation given: parallel line and contained point; two ordered pairs; a point and the
		Solve systems of equations by graphing, elimination of a variable, and substitution
	Quadratic Equations	Solve quadratic equations by factoring, difference of squares, and the quadratic formula
	Functions	Identify domain, range, independent, and dependent variable
Know whether a set, diagram, or graph of a relation also describes a function		
Use functional notation to find the value for the dependent variable when a value is assigned for		
Number and Set Concept	Identify which operations will have closure for different sets of numbers	
	Classify real numbers as naturals, wholes, integers, rationals, and/or reals, using set notation	
	Identify properties of real numbers	