

HUUSD Common Core Curriculum Standards Map- Mathematics K-12

Primary/Elementary Grades

	Operations and Algebraic Thinking	Number and Operations in Base Ten	Number and Operations- Fractions	Measurement and Data	Geometry	Mathematical Practices
<b>Kindergarten</b>	<p>Understand addition as putting together and adding to and subtraction as taking apart and taking from</p> <p><b>Counting and Cardinality</b></p> <p>Know number names and counting sequences</p> <p>Count to tell the number of objects</p> <p>Compare numbers</p>	Work with numbers 11-19 to gain foundations in place value		<p>Describe and compare measurable attributes</p> <p>Classify objects and count the numbers of objects in a category</p>	<p>Identify and describe shapes</p> <p>Analyze and compare, create and compose shapes</p>	<p>Make sense of problems and persevere in solving them.</p> <p>Reason abstractly and quantitatively.</p> <p>Construct viable arguments and critique the reasoning of others.</p> <p>Model with mathematics</p> <p>Use appropriate tools strategically.</p> <p>Attend to precision.</p> <p>Look for and make use of structure.</p>
<b>Grade 1</b>	<p>Represent and solve problems involving addition and subtraction</p> <p>Understand and apply properties of operations and the relationship between addition and subtraction</p> <p>Add and subtract within 20</p> <p>Work with addition and subtraction equations</p>	<p>Extend the counting sequence</p> <p>Understand place value</p> <p>Use place value understanding properties of operations to add and subtract</p>		<p>Measure lengths indirectly and by iterating length units</p> <p>Tell and write time</p> <p>Represent and interpret data</p>	Reason with shapes and their attributes	Look for and express regularity in repeated reasoning
<b>Grade 2</b>	<p>Represent and solve problems involving addition and subtraction</p> <p>Add and subtract within 20</p> <p>Work with equal groups of objects to gain foundations for multiplication</p>	<p>Understand place value</p> <p>Use place value understanding properties of operations to add and subtract</p>		<p>Measure and estimate lengths in standard units</p> <p>Relate addition and subtraction to length</p> <p>Work with time and money</p> <p>Represent and interpret data</p>	Reason with shapes and their attributes	
<b>Grade 3</b>	<p>Represent and solve problems involving multiplication and division</p> <p>Understand the properties of multiplication and the relationship between multiplication and division</p> <p>Multiply and divide within 100</p> <p>Solve problems involving the four operations, and identify and explain patterns in arithmetic</p>	Use place value understanding and properties of operations to perform multi-digit arithmetic	Develop understanding of fractions as numbers	<p>Solve problems involving measurement and estimation of intervals of time, liquid volume, and masses of objects</p> <p>Represent and interpret data</p> <p>Geometric measurement: understand concepts of area and relate area to multiplication and addition</p> <p>Geometric measurement: Recognize perimeter as an attribute of plane figures and distinguish between linear and area measures</p>	Reason with shapes and their attributes	
<b>Grade 4</b>	<p>Use the four operations with whole numbers to solve problems</p> <p>Gain familiarity with factors and multiples</p> <p>Generate and analyze patterns</p>	<p>Generalize place value understanding for multi-digit whole numbers</p> <p>Use place value understanding and properties of operations to perform multi-digit arithmetic</p>	<p>Extend understanding of fraction equivalence and ordering</p> <p>Build fractions from unit fractions by applying and extending previous understanding of operations on whole numbers</p> <p>Understand decimal notation for fractions, and compare decimal fractions</p>	<p>Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit</p> <p>Represent and interpret data</p> <p>Geometric measurement: Understand concepts of angle and measure angles</p>	Draw and identify lines and angles, and classify shapes by properties of their lines and angles	
<b>Grade 5</b>	<p>Write and interpret numerical expressions</p> <p>Analyze patterns and relationships</p>	<p>Understand the place value system</p> <p>Perform operations with multi-digit whole numbers and with decimals to hundredths</p>	<p>Use equivalent fractions as a strategy to add and subtract fractions</p> <p>Apply and extend previous understandings of multiplication and division to multiply and divide fractions</p>	<p>Convert like measurement units within a given measurement system</p> <p>Represent and interpret data</p> <p>Geometric measurement: understand concepts of volume and relate volume to multiplication and division</p>	<p>Graph points on a coordinate plane to solve real-world and mathematical problems</p> <p>Classify two-dimensional figures into categories based on their properties</p>	

## Middle Grades

	Ratios and Proportional Relationships	The Number System	Expressions and Equations	Functions	Geometry	Statistics and Probability	Mathematical Practices
<b>Grade 6</b>	Understand ratio concepts and use ratio reasoning to solve problems	Apply and extend previous understandings of multiplication and division to divide fractions by fractions  Compute with multi-digit numbers and find common factors and multiples  Apply and extend previous understandings of numbers to the system of rational numbers	Apply and extend previous understandings of arithmetic to algebraic expressions  Reason about and solve one variable equations and inequalities  Represent and analyze quantitative relationships between dependent and independent variables		Solve real world and mathematical problems involving area, surface area, and volume	Develop understanding of statistical variability  Summarize and describe distributions	Make sense of problems and persevere in solving them.  Reason abstractly and quantitatively.  Construct viable arguments and critique the reasoning of others.  Model with mathematics  Use appropriate tools strategically.
<b>Grade 7</b>	Analyze proportional relationships and use them to solve real-world and mathematical problems	Apply and extend previous understandings of operations with fractions to add, subtract, multiply and divide rational numbers	Use properties of operations to generate equivalent expressions  Solve real-life and mathematical problems using numerical and algebraic expressions and equations		Draw, construct, and describe geometrical figures and describe the relationship between them  Solve real-life and mathematical problems involving angle measure, area, surface area, and volume	Use random sampling to draw inferences about a population  Draw informal comparative inferences about two populations  Investigate chance processes and develop, use, and evaluate probability models	Attend to precision.  Look for and make use of structure.  Look for and express regularity in repeated reasoning
<b>Grade 8</b>		Know that there are numbers that are not rational and approximate them by rational numbers	Work with radicals and integer exponents  Understand the connections between proportional relationships lines and linear equations  Analyze and solve linear equations and simultaneous linear equations	Define, evaluate, and compare functions  Use functions to model relationships between quantities	Understand congruence and similarity using physical models, transparencies, or geometry software  Understand and apply the Pythagorean Theorem  Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres	Investigate patterns of association and bivariate data	

## High School

The Real Number System	Quantities	The Complex Number System	Vector and Matrix Quantities	Mathematical Practices
Extend the properties of exponents to rational exponents  Use properties of rational and irrational numbers	Reason quantitatively and use units to solve problems	Perform arithmetic operations with complex numbers  Represent complex numbers and their operations on the complex plane  Use complex numbers in polynomial identities and equations	Represent and model with Vector quantities  Perform operations on vectors  Perform operations on matrices and use matrices in applications	Make sense of problems and persevere in solving them.  Reason abstractly and quantitatively.  Construct viable arguments and critique the reasoning of others.  Model with mathematics  Use appropriate tools strategically.  Attend to precision.  Look for and make use of structure.  Look for and express regularity in repeated reasoning