CCLSM Numeracy Strands Overview (K-8)

***All Clusters Listed are Major Clusters or Areas of Intensive Focus – exceptions are: Blue – Supporting Cluster and Orange – Additional Cluster**

	Counting & Cardinality	Operations & Algebraic Thinking	Number & Operations in Base Ten	Number & Operations—Fractions
K	• Know number names and the count sequence. • Count to tell the number of objects. • Compare numbers	• Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	• Work with numbers 11-19 to gain foundations for place value.	
1	• 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. • Work with addition and subtraction equations.		• Extend the counting sequence. • Understand place value. • Use place value understanding and properties of operations to add and subtract.	
2	• Represent and solve problems involving addition and subtraction. • Add and subtract within 20. • Work with equal groups of objects to gain foundations for multiplication.		• Understand place value. • Use place value understanding and properties of operations to add and subtract.	
3	• Represent and solve problems involving multiplication and division. • Understand properties of multiplication and the relationship between multiplication and division. • Multiply and divide within 100. • Solve problems involving the four operations, and identify and explain patterns in arithmetic.		• Use place value understanding and properties of operations to perform multi-digit arithmetic.	• Develop understanding of fractions as numbers.
4	• Use the four operations with whole numbers to solve problems. • Gain familiarity with factors and multiples. • Generate and analyze patterns.		• Generalize place value understanding for multi-digit whole numbers. • Use place value understanding and properties of operations to perform multi-digit arithmetic.	• Extend understanding of fraction equivalence and ordering. • Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. • Understand decimal notation for fractions, and compare decimal fractions.
5	• Write and interpret numerical expressions. • Analyze patterns and relationships.		• Understand the place value system. • Perform operations with multi-digit whole numbers and with decimals to hundredths.	• Use equivalent fractions as a strategy to add and subtract fractions. • Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
6	Expressions & Equations • 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.		The Number System • Apply and extend previous understandings of multiplication and division to divide fractions by fractions. • Compute fluently with multi-digit numbers and find common factors and multiples. • Apply and extend previous understandings of numbers to the system of rational numbers.	
7	• Use properties of operations to generate equivalent expressions. • Solve real-life and mathematical problems using numerical and algebraic expressions and equations.		• Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	
8	• Work with radicals and integer exponents. • Understand the relationship between proportional relationships, lines, and linear equations. • Analyze and solve linear equations and pairs of linear equations		• Know that there are numbers that are not rational, and approximate them by rational numbers.	