Laredo Middle School Math Department

Vision: The goal for our Laredo students is that they leave middle school with a strong foundation in mathematics and an understanding of its relevance in their lives. We want to make sure that they are prepared to be successful in their future mathematics studies, as well as to be knowledgeable about mathematics in their world. Mathematics is essential for all students as they grow to understand their world and become productive citizens. Mathematical models explain, celebrate, and analyze the world around us; from economic models on the stock market to musical models of symphonies, our world is mathematics. We want students to leave Laredo as confident problem solvers ready to tackle whatever comes their way.

In alignment with the National Council of Teachers of Mathematics, this means the math department at Laredo will help students by:

- developing their college and career readiness
- deepening understanding and critiquing the world using mathematics
- experiencing joy, wonder, and the beauty of mathematics

Courses offered: We offer a choice of courses to best meet the needs of our students. While students are initially placed in courses based on elementary school recommendations, they are offered the opportunity to change paths throughout middle school. These changes are based on a body of evidence which includes, but may not be limited to academic grades, standardized test results, teacher recommendation, student interest, determination, and work ethic, and district/local school formative and summative assessments. We also offer math remediation classes for those students who need more time with foundational math skills.

Grade Level	Courses Offered
6	Math 6 or Math 6/7
7	Math 7 or Math 7/8
8	Math 8 or Algebra 1

Standards Covered: Each mathematics class at Laredo addresses the appropriate standards defined by the Cherry Creek Academic Standards for Mathematics. These standards define what should be taught at each grade level. Embedded within each standard are the Standards for Mathematical Practice. These standards describe varieties of expertise that students should develop throughout their mathematical studies. They focus on problem solving, reasoning and proof, communication, representation, and connections.

Sixth Grade	
Standard 1: Number Sense, Properties, and Operations Grade 6	1. Quantities can be expressed and compared using ratios and rates. 2. Formulate, represent, and use algorithms with positive rational numbers with flexibility, accuracy, and efficiency. 3. In the real number system, rational numbers have a unique location on the number line and in space.
Standard 2: Patterns, Functions, and Algebraic Structures Grade 6	1. Algebraic expressions can be used to generalize properties of arithmetic. 2. Variables are used to represent unknown quantities within equations and inequalities.
Standard 3: Data Analysis, Statistics and Probability Grade 6	1. Visual displays and summary statistics of one-variable data condense the information in data sets into usable knowledge.
Standard 4: Shape, Dimension and Geometric Relationships Grade 6	1. Objects in space and their parts and attributes can be measured and analyzed. 2. 2. Linear measure, angle measure, area, and volume are fundamentally different and require different units of measure.

Seventh Grade	
Standard 1: Number Sense, Properties, and Operations Grade 7	1. Proportional reasoning involves comparisons and multiplicative relationships among ratios. 2. Formulate, represent, and use algorithms with rational numbers flexibly, accurately, and efficiently.
Standard 2: Patterns, Functions, and Algebraic Structures Grade 7	1. Properties of arithmetic can be used to generate equivalent expressions. 2. Equations and expressions model quantitative relationships and phenomena.
Standard 3: Data Analysis, Statistics and Probability Grade 7	1. Statistics can be used to gain information about populations by examining samples. 2. Mathematical models are used to determine probability.
Standard 4: Shape, Dimension and Geometric Relationships Grade 7	1. Modeling geometric figures and relationships leads to informal spatial reasoning and proof. 2. Linear measure, angle measure, area, and volume are fundamentally different and require different units of measure.

Eight Grade

Standard 1: Number Sense, Properties, and Operations Grade 8	1. In the real number system, rational and irrational numbers are in one to one correspondence to points on the number line.
Standard 2: Patterns, Functions, and Algebraic Structures Grade 8	1. Linear functions model situations with a constant rate of change and can be represented numerically, algebraically, and graphically. 2. Properties of algebra and equality are used to solve linear equations and systems of equations. 3. Graphs, tables and equations can be used to distinguish between linear and nonlinear functions.
Standard 3: Data Analysis, Statistics and Probability Grade 8	1. Visual displays and summary statistics of two-variable data condense the information in data sets into usable knowledge.
Standard 4: Shape, Dimension and Geometric Relationships Grade 8	1. Transformations of objects can be used to define the concepts of congruence and similarity. 2. Direct and indirect measurement can be used to describe and make comparisons.

Algebra 1

Standard 1: Number Sense, Properties, and Operations Algebra I	1. The complex number system includes real numbers and imaginary numbers. 2. Quantitative reasoning is used to make sense of quantities and their relationships in problem situations.
Standard 2: Patterns, Functions, and Algebraic Structures Algebra I	1. Functions model situations where one quantity determines another and can be represented algebraically, graphically, and using tables. 2. Quantitative relationships in the real world can be modeled and solved using functions. 3. Expressions can be represented in multiple, equivalent forms. 4. Solutions to equations, inequalities and systems of equations are found using a variety of tools.
Standard 3: Data Analysis, Statistics and Probability Algebra I	1. Visual displays and summary statistics condense the information in data sets into usable knowledge.

Math 6/7 covers the entirety of the 6th grade standards and Standards 1 and 2 from the 7th grade.

Math 7/8 covers standards 3 and 4 from 7th grade and the entirety of the 8th grade.