Center Middle School Course Syllabus

8th Grade Math

Course Description & Overview	Textbook or Curriculum Source	Assessments for Course
8th Grade Math focuses on preparing students for higher-level math courses, especially Algebra I. A breakdown of the key focus areas: **Number and Operations:** Students extend their understanding of real numbers, including rational and irrational numbers, approximating their values, converting between standard decimal and scientific notation, and ordering sets of real numbers. **Proportionality:** This area focuses on using proportional relationships to describe dilations and exploring linear relationships, including: **Slope and y-intercept:** Determining the rate of change and initial value from tables and graphs. **Proportional and non-proportional relationships:** Representing these relationships with tables, graphs, and equations (y = kx and y = mx + b).	Bluebonnet, TEKS Resource	8th Grade Math STAAR Mid Year Benchmark Spiralled Assessments

Functions: Identifying functions using various representations and recognizing proportional and non-proportional functions in mathematical and real-world problems. **Expressions, Equations, and Relationships:** This involves working with equations and inequalities, including: **Solving one-variable equations and inequalities**: Representing and solving problems with variables on both sides of the equal sign, including those with rational number coefficients and constants. **Geometric formulas:** Applying geometric formulas to solve problems involving two-dimensional shapes. **Pythagorean Theorem:** Using models and diagrams to explain and apply the Pythagorean Theorem and its converse, including determining the distance between two points on a coordinate plane. **Systems of linear equations:** Generating and solving linear systems with two equations and two variables, and understanding their associated solutions in both mathematical and real-world situations. **Transformational Geometry:** Students explore various transformations, including reflections, rotations, dilations, and translations, and analyze their effects on figures on the coordinate plane.		

Data Analysis: Students learn to use technology to collect and explore data and analyze statistical relationships. They use appropriate statistics and data representations to draw conclusions, evaluate arguments, and make recommendations. **Personal Financial Literacy:** Understanding and applying concepts related to personal finances, including simple and compound interest, and estimating college education costs. In addition to these content areas, 8th-grade math in Texas emphasizes mathematical process standards. These standards focus on students applying mathematics to real-world problems, using problem-solving models, selecting appropriate tools, communicating mathematical ideas using various representations, analyzing relationships, and justifying their thinking. Overall, 8th Grade Math in Texas aims to build a strong foundation in algebraic concepts, geometric principles, data analysis, and problem-solving, encouraging students to apply these skills to real-world situations and develop strong mathematical communication skills		

Course Content by Grading Period	
1st Grading Period	Value and Magnitude of Rational Numbers Statistics with Univariate Data One-Variable Equations, Inequalities, and their Applications Developing an Understanding of Slope and Y-Intercept Proportional and Non-Proportional Functions
2nd Grading Period	Proportional and Non-Proportional Functions Statistics with Bivariate Data Transformational Geometry
3rd Grading Period	Angle and Triangle Relationships involving Real Numbers Measurement of Three-Dimensional Figures Making Connections
4th Grading Period	Making Connections Financial Planning Essential Understandings of Algebra

Grading Policy

In determining the 9-week average, a minimum of 15 grades from different assignments or components of major projects must be recorded. When calculating a nine- weeks average, NO ONE ASSIGNMENT GRADE MAY COUNT MORE THAN 20% OF THE TOTAL AVERAGE, regardless of the grade category. Some major projects and writing samples may comprise more than one component and each component should be graded separately. In determining the nine-week average, grades will be divided into 2 categories and each category will count a designated percentage to determine student's grade. The 2 categories are; Assessments/Major Grade – Assessments, Performance Assessments, Major Projects/Papers will count TWICE Quizzes/Daily Work- will count one time Semester Average shall be determined by the following: Nine Weeks 1/2 Nine Weeks 1/2