



QSI INTERNATIONAL
SCHOOL OF DILI



Middle School and Secondary mathematics

2024-2025

Mr. Dave Kalberg

Agenda

Introduction

Curriculum/Pacing guide

Mathematical Practices

Schedule

Classes

Grading

Metal Math

Success Orientations

Communication

Mr. Dave Kalberg

- Teaching is my second career
- My previous job was a heavy-duty diesel mechanic
- I learned how to work on and fly helicopters in the U. S. Army
- I enjoy stand up paddle boarding, kayaking, math puzzles, old music, and going to the gym





Mr. Dave Kalberg MS/Sec 2024-2025

Quintile	Quintile #1 Aug 15- Oct 4		Quintile #2 Oct 7- Dec 6		Quintile #3 Jan 6- Feb 24		Quintile #4 Feb 25- Apr 23		Quintile #5 Apr 24- Jun 17	
Course	Aug 15- Sept 10 (18)	Sept 11- Oct 4 (18)	Oct 7- Nov 8 (18)	Nov 11- Dec 6 (18)	Jan 6- Jan 29 (18)	Jan 30- Feb 24 (18)	Feb 25- Mar 21 (18)	Mar 24- Apr 23 (18)	Apr 24- May 22 (18)	May 23- Jun 17 (18)
AP Stats	E01 – Exploring One Variable Data (15-23%)	E02 – Exploring Two Variable Data (5-7%)	E03 – Collecting Data (12-15%)	E04 – Probability, Random Variables (10-20%)	E05 – Sampling Distributions (7-12%)	E06 – Interference Cat. Data (Proportions) (12-15%)	E07 – Interference Quan. Data (Means) (10-18%)	E08/E09 – Interference (Chi-Square) (Slopes) (2-5%) each	S01 – AP Exam Review	S02 – Statistical Research Project
Alg 2	E01 – Linear Functions and Systems	E02 – Quadratic Functions and Equations	E03 – Polynomials	E04 – Rational Functions	E05 – Rational Exponents and Radical Functions	E06 – Exponential and Logarithmic Functions	E07 – Trigonometric Functions	E08 – Trigonometric Equations	S06 – Data Analysis and Statistics	S07 – Probability
Geometry	E01 – Foundations of Geometry	E02 – Perpendicular and Parallel Lines	E03 – Transfor- mations	E04 – Triangle Congruency	E05 – Properties and Attributes of Triangles	E06 – Quadrilaterals and Other Polygons	E07 – Similarity	E08 – Right Triangles and Trigonometry	E09 – Two and Three Models	E10 – Circles
13 YO	S08 – Real Numbers	E01 – Linear Equations	E02 – Functions	E03 – Data Investigations	E04 – Systems of Linear Equations	E05 – Transfor- mations	E06 – Dilation, Similarity, and Angles	E07 – The Pythagorean Theorem	E08 – Surface Area and Volume	S06 – Mathematical Reinforce- ment
11 YO	E01 – Positive Rational Numbers 1	E02 – Positive Rational Numbers 2	E03 – Integers and Rational Numbers	E04 – Numeric and Algebraic Expressions	E05 – Equations and Inequalities	E06 – Ratio and Rate	E07 – Percent	E08 – Area and Volume	E09 – Display, Describe, and Summarize Data	S07 – Mathematical Reinforce- ment

Make	Reason	Construct	Model	Use	Attend	Look	Look
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

The Mathematical Practices



Dave Kalberg

Period	Time	A	B
First Bell	8:10		
1	8:15- 9:45	AP Statistics	Prep
Break	9:45- 9:58		
2	10:00- 11:30	Geometry	Study Hall Empower
Lunch/Recess	11:30- 12:13		
3	12:15- 1:45	Prep	13YO Math
Break	1:45- 1:53		
4	1:55- 3:25	Algebra 2	11YO Math
ASA	3:30- 4:15		



Office hours: Tuesday 3:30-4:15 or Thursday by special appointment

EXPERIENCE

FIRST

FORMALIZE

LATER

+ MATH MI

- **AP Statistics**
- **Advanced Math**
- **Geometry**

Experience First, Formalize Later means that students are working collaboratively to think, to discuss, and to construct their own understanding of new content before the teacher helps students to arrive at formal definitions and formulas.

Advanced Placement (AP) Statistics is an introductory college-level course focused on key statistical concepts and tools for data collection, analysis, and interpretation, preparing students for further mathematics studies. The course emphasizes hands-on learning through technology, problem-solving, and statistical communication, with students conducting surveys and experiments, using tools like TI-83/84 calculators and statistical software.

The Advanced Math course extends students' understanding of functions and real numbers and increases the tools the students have for modeling the real world. The course includes a review of linear equations and inequalities as well as the study of quadratic, exponential, logarithmic, polynomial, and trigonometric functions and their inverses. In this course students are expected to engage in math modeling and hands-on activities with an emphasis on graph analysis and problem solving

The Geometry Course lays the foundation for logical reasoning that forms the crux of all higher-level mathematics courses. The course begins with the basic building blocks of geometry and goes on to cover figures in the coordinate plane and solids in three dimensions. The basics of trigonometry are introduced and practiced culminating with selective unit on circles.

The Foundations of Algebra-13 course aims to reinforce essential skills for algebra by covering key content areas such as ratio and proportional reasoning, number sense, and expressions and equations, ultimately leading to an understanding of functions and linearity. Students are encouraged to apply their operational fluency as they tackle new problems, emphasizing the importance of making connections between concepts.

The Mathematics-11 course is designed to help students learn mathematical concepts by connecting them to their prior knowledge and real-world applications. It covers essential topics such as number sense, including fractions and decimals, ratio reasoning, and area while also introducing algebraic concepts like equality, inequality, and variables. Emphasizing collaboration, the course encourages students to discuss various strategies and engage with open-ended questions that promote involvement and success for all learners.

Mastery learning

QSI follows the mastery model of education. Pre-assessment gauges the knowledge students possess before beginning each unit. Group instruction with differentiation is applied to teach the unit's outcomes. Ongoing formative assessment is used to gauge teaching; informing the instructor on when students are ready for assessment. Suggested rubrics are provided for unit assessments.

Mental Math for Math Fluency

READY FOR A CHALLENGE?

Directions: Use your math skills to find the value of each icon and the '?' in the puzzle below.

$$24 = \text{two bears} + \text{two bears} + \text{one gorilla}$$

$$\text{one gorilla} - \text{two bears} = 0$$

$$40 = \text{two dinosaurs} \times \text{two dinosaurs} + \text{one bear}$$

$$151 = \text{one penguin} + \text{two dinosaurs} \times \text{two dinosaurs}$$

$$\text{two penguins} + \text{one gorilla} \times \text{two dinosaurs} = ?$$

My Answer: ? = _____

Try this...

$$7 \times 24 =$$

$$7 \times (20 + 4)$$

$$7 \times 20 =$$

$$7 \times 4 =$$

Success Orientations

The seven success orientations are an important part of the QSI experience that the school consider to be the keys of success.

Group Interaction

Responsibility

Independent Endeavor

Concern for Others

Kindness and Politeness

Aesthetic Appreciation

Trustworthiness

Communication

Email: dave-kalberg@dil.qsi.org

The Crocodile Chronicle – School Weekly Newsletter

Mathematics Newsletter every other Friday

TEAMS

