



Name of Intermediate School:

Name of Course: 8<sup>th</sup> Grade Math

### Instructor Information

**Name:**

**E-mail address:**

**School phone number:**

**Web page address:**

**Best times to be reached:**

### Course Description

The mathematical content in eighth grade includes numbers, algebra, geometry, measurement, statistics, and probability. Our units develop a “big mathematical idea,” that is, an important cluster of related concepts, skills, procedures, and ways of thinking while integrating technology.

We have a standards-based program that engages, challenges, and prepares students for continued study and growth in mathematical skills and understandings, causing them to develop mathematical habits of mind and to understand and appreciate the role of mathematics in real world situations.

This course uses an equation solving approach to problem solving. It moves from concrete numerical concepts to abstract concepts. It becomes the language of advanced mathematics courses.

### District Standards and Power Benchmarks

#### The Number System

- Know that there are numbers that are not rational, and approximate them by rational numbers.

#### Expressions and Equations

- Work with radicals and integer exponents.
- Understand the connections between proportional relationships, lines, and linear equations.
- Analyze and solve linear equations and pairs of simultaneous linear equations.

#### Functions:

- Define, evaluate, and compare functions.
- Use functions to model relationships between quantities.

#### Geometry

- 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.

#### Statistics and Probability

- Investigate patterns of association of bivariate data

### Course Information

Course length: One Year

## Course Outline/Calendar

First Quarter	> <i>Moving Straight Ahead</i> > <i>Thinking with Mathematical Models</i> – Linear & Inverse Variation
Second Quarter	> <i>Looking for Pythagoras</i> – Pythagorean Theorem > <i>Growing, Growing, Growing</i> – Exponential Relationships
Third Quarter	> <i>Kaleidoscopes, Hubcaps, and Mirrors</i> – Symmetry & Transformations > <i>Say it With Symbols</i> – Making Sense of Symbols
Fourth Quarter	> <i>Say it With Symbols</i> continued > <i>Samples and Populations</i> – Data and Statistics > Finance Park > <i>Shapes of Algebra</i> – Linear Systems & Inequalities if time allows

## Text/Other Required Materials/Resources

Textbook: *Connected Mathematics 2*, copyright 2006, Pearson Prentice Hall  
Students are expected to bring all supplies to class every day including notebook, paper, pencil, and calculator.

## Instructional Procedures & Support

Teaching Strategies and Instructional Method(s): Direct instruction, cooperative groups, vocabulary strategies, discovery activities, guided practice, student note taking and journaling.  
Academic Expectations of Students: Good attendance and punctuality are critical for success in this course. Students should expect to spend approximately 30 minutes each night completing assignments, reviewing notes, and reading text.  
Major Course Assignments: Assignments will be given on a regular basis. Quizzes will be given throughout the unit. Tests will be given at the end of each unit. Several units will require a completed project or activity. District Assessments will be given at the end of each quarter  
Homework Expectations: Homework assignments are expected to be turned in the day it is due.  
Make-Up Work: If a student has an absence they should get all assignments, tests and quizzes done within four days of their return to school. Students who are absent more than one day should contact the school or instructor to get their make-up work before or after school.  
Extra Help: Students can get extra. Please let your instructor know the time that you are available to come in if you need extra help

## Classroom Management Procedures

1. School attendance policy will be followed.
2. Students are expected to bring all supplies to class every day.

## Assessment Plan

Classwork/Openers/Notebooks	15%
Concept Checks/Projects	20%
Quizzes/Tests	55%
Final	10%

Grades will be communicated to students regularly. Reports will be sent home at midterm and each end of term.

## Grading System

Grades will be determined by the DCSD Grading Scale with the Power of I:

100-90	A
89-80	B
79-70	C
69-0	I (Incomplete)