

Instructor: Jennifer Umberhocker Course: Mathematics
Academic Year: 2008-2009

Course Philosophy: This course is designed to prepare students for the study of the Algebras and Geometry. We will explore whole numbers, fractions, decimals, mixed numbers, measurement, ratios, proportions and percents. We will also explore geometry. Above all, we want you to have fun and learn everyday practical uses for math.

Course Requirements:

- Textbook: McDougal Littell Middle School Math Course 2
- Loose-leaf paper
- Writing implements

Homework Expectations:

- All math homework should be done in pencil and kept neatly in your binder.
- It must be labeled with the page number, the problem numbers and the date.
- You should show your work for each problem.
- Each assignment is due at the beginning of the class period.
- Homework will count for 10% of your grade

Grades will be based on the following:

- Tests
- Quizzes – both announced and unannounced
- Graded assignments
- Homework completion – 10%

Grading scale

90 -100 -A- to A+ 60 – 69 -D- to D+

80 – 89 - B- to B+ 0 – 59 - F

70 – 79 - C- to C+

Class Rules and Expectations:

- **Preparation** – Come to class on time, with necessary materials, prepared to get started, and have assignments and notes organized.
- **Participation** – Pay attention, take notes, ask questions, and share solutions.
- **Positive Attitude** – Complete all homework, get help when needed, take pride in your work, respect yourself and others, and take tests with confidence!
- **Cheating is not acceptable**

Week Chapter Topics

Week 1 Chapter 1 Number Sense, Patterns, & Algebraic Thinking

Week 2 Chapter 1 Number Sense, Patterns, & Algebraic Thinking

Week 3 Chapter 2 Decimal Operations

Week 4 Chapter 2 Decimal Operations

Week 5 Chapter 4 Number Patterns & Fractions

Week 6 Chapter 4 Number Patterns & Fractions

Week 7 Chapter 4 Number Patterns & Fractions

Week 8 Review/Midterm

Week 9 Chapter 5 Fraction Operations

Week 10 Chapter 5 Fraction Operations

Week 11 Chapter 5 Fraction Operations

Week 12 Review/Final *End of 1st Trimester*

Week 13 Chapter 6 Integers

No classes

Week 14 Chapter 6 Integers

Week 15 Chapter 7 Equations, Inequalities & Functions

Week 16 Chapter 7 Equations, Inequalities & Functions

Xmas Break

Xmas Break

Week 17 Chapter 7 Equations, Inequalities & Functions

Week 18 Review/Midterm

Week 19 Chapter 8 Ratios & Proportions

Week 20 Chapter 8 Ratios & Proportions

Week 21 Chapter 9 Percents

Week 22 Chapter 9 Percents

Week 23 Review/Final *End of 2nd Trimester*

Week 24 Chapter 10 Geometric Figures

Week 25 Chapter 10 Geometric Figures

Week 26 Chapter 10 Geometric Figures

Week 27 Review

Spring Break

Week 28 Chapter 11 Measurement & Area

Week 29 Chapter 11 Measurement & Area

Week 30 Chapter 11 Measurement & Area

Week 31 Chapter 12 Surface Area & Volume

Week 32 Chapter 12 Surface Area & Volume

Week 33 Chapter 12 Surface Area & Volume

Week 34 Review

Week 35 Final *End of 3rd Trimester*

Middle School Mathematics

I. Number Sense, Patterns, and Algebraic Thinking

- A. Describing Patterns
- B. Variables and Expressions
- C. Powers and Exponents
- D. Order of Operations
- E. Equations and Mental Math
- F. Perimeter and Area
- G. Problem Solving Plans

II. Decimal Operations

- A. Comparing, Ordering, and Rounding Decimals
- B. Adding and Subtracting Decimals
- C. Multiplying Decimals
- D. Dividing Decimals
- E. Scientific Notation
- F. Measuring in Metric Units
- G. Converting Metric Units

III. Number Patterns and Fractions

- A. Prime Factorization
- B. Greatest Common Factor
- C. Equivalent Fractions
- D. Least Common Multiple
- E. Comparing and Ordering Fractions
- F. Mixed Numbers and Improper Fractions
- G. Fractions and Decimals

IV. Fraction Operations

- A. Adding and Subtracting Fractions
- B. Adding and Subtracting Mixed Numbers
- C. Multiplying Fractions and Mixed Numbers
- D. Dividing Fractions and Mixed Numbers
- E. Measuring in Customary Units
- F. Converting Customary Units

V. Integers

- A. Comparing and Ordering Integers
- B. Adding Integers
- C. Subtracting Integers
- D. Multiplying Integers
- E. Dividing Integers
- F. Rational Numbers
- G. The Distributive Property
- H. The Coordinate Plane

VI. Equations, Inequalities, and Functions

- A. Writing Expressions and Equations
- B. Simplifying Expressions
- C. Solving Addition and Subtraction Equations
- D. Solving Multiplication and Division Equations
- E. Solving Two-Step Equations
- F. Solving Inequalities
- G. Functions and Equations
- H. Graphing Functions

VII. Ratios and Proportions

- A. Ratios
- B. Rates
- C. Slope
- D. Writing and Solving Proportions
- E. Solving Proportions Using Cross Products
- F. Scale Drawings and Models

VIII. Percents

- A. Percents and Fractions
- B. Percents and Proportions
- C. Percents and Decimals
- D. The Percent Equation
- E. Circle Graphs
- F. Percent of Increase and Decrease
- G. Discounts, Markups, Sales Tax, and Tips
- H. Simple Interest

IX. Geometric Figures

- A. Angles
- B. Special Pairs of Angles
- C. Triangles
- D. Polygons
- E. Similar and Congruent Polygons

- F. Using Proportions with Similar Polygons
- G. Transformations and Symmetry
- H. Transformations in the Coordinate Plane

X. Measurement and Area

- A. Square Roots
- B. Approximating Square Roots
- C. The Pythagorean Theorem
- D. Area of a Parallelogram
- E. Areas of Triangles and Trapezoids
- F. Circumference of a Circle
- G. Area of a Circle

XI. Surface Area and Volume

- A. Classifying Solids
- B. Sketching Solids
- C. Surface Area of Rectangular Prisms
- D. Surface Area of Cylinders
- E. Volume of Rectangular Prisms
- F. Volume of Cylinders