

**Central Middle School
1012 Hancock Street
617-984-8725**

GRADE 8 PRE-ALGEBRA COURSE SYLLABUS

TEACHER:

Mrs. Amy Malone

COURSE/GRADE LEVEL:

Grade 8 Pre-Algebra

INSTRUCTIONAL MATERIALS:

MATH Course 3: McDougal Littell, Connected Mathematics, Manipulatives

MAJOR TOPICS:

I. Exploring Patterns

- Number Patterns and Operations
- Powers and Square Roots
- Order of Operations
- Variables in Expressions
- Tables and Graphs
- Patterns in Geometry and Technology

II. Investigations in Algebra

- The Distributive Property
- Combining like Terms
- One-Step Equations
- Model Verbal Expressions and Sentences
- Problem Solving Using Equations
- Simple Inequalities

III. Integers

- Integers and Absolute Value
- Adding and Subtracting Integers
- Multiplying and Dividing Integers
- Problem Solving Using Integers
- Patterns in the Coordinate Plane

IV. The Language of Algebra

- Solve Two-Step and Multi-Step Equations
- Solve Equations Using the Distributive Property
- Solve Problems with Two or More Step Equations
- Use Formulas from Geometry to Solve Problems

V. Number Theory

- Divisibility Tests, Factors and Primes
- Greatest Common Factor and Least Common Multiple
- Rational Numbers and Decimals
- Powers and Exponents, Negative and Zero Exponents
- Scientific Notation

VI. Geometry

- Perimeter, Area, Circumference

Surface Area of prisms and Cylinders
Volume of Prisms, Cylinders, Pyramids, Cones and Spheres

VII. Proportion, Percent and Probability

Write Decimals as Percents and Percents as Decimals
Write Fractions as Percents and Percents as Fractions
Find a Percent of a Number
Problem Solving with Percent
Rates, Ratios, and Proportions
Solving Problems with Proportions
Solve Three Types of Percent Problems with Proportions
Find Percent of Increase and Decrease, Discount, Commission

VIII. Real Numbers and Inequalities

Squares, Square Roots, and the Pythagorean Theorem
Solve and Graph Inequalities
The Triangle Inequality

ASSESSMENT TOOLS

Group and Individual Projects	Notebooks
Interdisciplinary activities	Word Problem Sets
Quizzes	Tests
Homework	

See Student Individual Education Plans or 504 Plans for modification where applicable.

HOMEWORK EXPECTATIONS

Homework is given almost every night and is usually due the following day. Homework grades are based on completion not accuracy and are given as follows:

3 = complete and on-time	1 = complete and more than one day late
2 = complete and one day late	0 = missed assignment

GRADING POLICY

At the end of the term, final grades are computed as follows:

Tests	45%
Quizzes	45%
Homework	10%
Notebook	Counts as one quiz grade
Projects	Count as one quiz grade
Supply Check	Counts as one quiz grade
Participation	Counts as one quiz grade

SUPPLY CHECKS

Students must bring the following materials to class every day. On any given day (at least twice during a term), there will be a supply check that counts as a quiz grade:

Textbook/workbook	notebook
agenda book	pencil (pen does not count)
math folder	scientific calculator (TI-30X-IIS recommended)

MAKEUP PROCEDURE

If a student is absent, please see me upon return for assignments. Arrangements will be made to reschedule missed quizzes, tests and presentations. Make-up work is to be done in a reasonable amount of time based on the length of absence.