

DOBBS FERRY MIDDLE SCHOOL

Dobbs Ferry, New York 10522

COURSE OUTLINE

SUBJECT: Mathematics

GRADE: 8

Offered: Full Year

Type of Course: Required unless student is taking Algebra I

COURSE DESCRIPTION:

The eighth grade mathematics course focuses on the concepts outlined in the New York State Next Generation Learning Standards and builds upon the seventh grade concepts previously mastered. The course is broken into the following units: number system, expressions, equations, functions, geometry, probability, and statistics. At the end of the course students will have mastered all the concepts necessary to continue into the ninth grade Algebra I course. Math 8 is a more rigorous course which covers a variety of topics. You will be pushed to apply your prior knowledge to solve more complex problems. In this course we strive to have more of a growth mindset where you are free to explore and make mistakes. It is our belief that you learn from your mistakes. You will be encouraged to become more independent learners and utilize your notes and table partners as resources. We would like you to become risk-takers and attempt to work through problems on your own before asking for support. You will always be given the tools necessary to be able to accomplish these goals. Grades may fluctuate more throughout the year in comparison to your previous math courses.

KEY CONCEPTS:

- Relationships
- Logic

ANTICIPATED OUTCOMES:

By June of this year, students in this class will be able to:

- Perform and understand laws of exponents
- Use scientific notation
- Solve a variety of algebraic equations
- Translate expressions and equations
- Graph linear equations
- Solve systems of linear equations
- Construct functions
- Use the pythagorean theorem
- Identify angle relationships

- Perform transformations
- Identify differences between congruence and similarity
- Find volume and surface area
- Represent data in a variety of statistical plots

Materials Needed

- Chromebook
- Scientific Calculator (TI-34 MultiView)
- Binder
- Pencil Case
- Loose Leaf Paper
- Graph Paper
- One Folder
- One Ruler
- Highlighters
- Pens (blue or black only)
- Pencils

Criteria for Assessment

Grades will be based on the following:

- Homework
- MYP Projects & Assessments
- Tests & Quizzes

STUDENT/PARENT RESOURCES:

-www.mathisfun.com

-www.ixl.com

Outline developed by: Mathematics Department

Date: March 2026