

DOBBS FERRY MIDDLE SCHOOL
Dobbs Ferry, New York 10522

COURSE OUTLINE

SUBJECT: Mathematics

GRADE: 7

Course Description:

The mathematics course for seventh grade will provide students with the opportunity to learn mathematics with understanding and to acquire the skills needed to solve mathematical problems. Students should enter the grade with an in-depth knowledge of the traditional basics of mathematics of the Common Core grade 6.

Anticipated student outcomes:

Concepts are outlined in the Common Core Learning Standards on EngageNY.org, as well as in the front of the Glencoe Math textbook. The seventh grade curriculum builds upon the concepts previously mastered in the sixth grade.

Mastery of the following units is expected:

Ratios and Proportional Relationships

- Analyze proportional relationships and use them to solve real-world and mathematical problems.

Statements of Inquiry:

*Understanding how different **representations** can **change** the way we interpret the world around us.*

***Changes in quantity** allow us to determine meaningful **relationships**.*

The Number System

- Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

*Statement of Inquiry: Establishing **patterns** and forming **generalizations** in the natural world can help in understanding **relationships**.*

Expressions and Equations

- Use properties of operations to generate equivalent expressions.
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

*Statement of Inquiry: Creating **equivalent** and **simplified forms** of situations helps us understand the interconnectedness of the world in which we live.*

Statistics and Probability

- Use random sampling to draw inferences about a population.
 - Draw informal comparative inferences about two populations.
 - Investigate chance processes and develop, use, and evaluate probability models.
- Statement of Inquiry: **Logic** is a powerful tool for **justifying** and **modeling** what we discover through measurement and observation.*

Geometry

- Describe the relationships between the diameter, circumference and area of a circle.

Materials required:

1. Five-subject spiral notebook with pockets
2. Two Folders
3. Composition notebook
4. Scientific calculator [*Suggested calculator: TI-30XIIS (Texas Instruments)*]
5. Mechanical pencils/ pencils with sharpener
6. Red pens
7. Highlighters

Criteria for grading:

Grades will be determined by the percentage of *points earned* out of the *total number of possible points*. These points will be earned by student performance in the following areas: assessments (75% - classroom tests and MYP assessments), homework (15%), and class participation (10%) based on the Approaches to Learning (ATL) skills rubric.

All graded assignments will be available on the parent portal.

Resources:

The textbook for this course is Glencoe Math. There is an online component to this textbook that can be accessed by the following website: **ConnectEd.McGraw-Hill.com**. The online textbook has various resources, such as tutorials, e-help, and self-check quizzes. Students are encouraged to use the resources available for homework help and review for assessments. Students can also use **ixl.com** to practice skills online.