P.S. 035 Manhattan High School

Course Code: MQS96QQB/13

Syllabus for: Math Puzzles

Teacher Name: Ms. Ducret

Year and Term: 2022/1

Learning Standards:

AI-N.RN: Use properties of rational and irrational numbers.
AI-N.Q.3: Choose a level of accuracy appropriate to limitations on measurement and context when reporting quantities.
AI-A.SSE.2: Recognize and use the structure of an expression to identify ways to rewrite it.
AI-A.APR.1: Perform arithmetic operations on polynomials.
AI-A.CED.1: Create equations and inequalities in one variable to represent a real-world context.
AI-A.REI: Understand solving equations as a process of reasoning and explain the reasoning.
Connecting the Standards for Mathematical Practice to Mathematical Content:
Students are reasoning abstractly (MP.2) when they create abstract algebraic models of problems (AI-A.CED.1-4 and AI-F.BF.1).

Course Description: Math Puzzles is an elective course that connects the topic of Algebra with problem solving and critical thinking skills. In the elective, students engage and learn to play with math in many different formats and also explore strategies to improve their math skills, strengthen their reasoning and logical thinking skills, learn to persist with a difficult or complex task. Students work independently or collaboratively to build their own board game concept or game-based activity.

Calendar or Unit Map:

Numbers, Operations and Properties

- Order of Operations
- Evaluating Expressions
- Comparing and Classifying Numbers

Expressions and Equations

- Dependent and Independent Variable
- Modeling Expressions
- Solving Linear Equations
- Modeling Linear Equations

Polynomials

- Identifying Solutions
- Operations with Polynomials
- Factoring Polynomials

Rate

- Speed
- Rate of Change

Radicals

- Square Roots
- Simplifying Radicals
- Operations with Radicals

Systems

- Solving Linear Systems
- Modeling Linear Systems

Course Materials: Notebook, Pens and Pencils

Grading Policy:

Class Participation	-	25%
Daily Activity: puzzles, mazes, game boards	-	25%
Research	-	15%
Term Project: Independent, Groups, Pairs and Teams	-	35%