



6th Grade Math - Advanced

Ms. Herrera

Phone: (667) 401-2012

Email: clazo@hha47.org

Room 307

In sixth-grade math, Ms. Herrera's students will use manipulatives, critical thinking, and mental math in order to efficiently work through problem solving strategies. 6th grade Advanced Math at Hampstead Hill Academy uses SpringBoard Mathematics Course 1 and Course 2 as the main curriculum. "SpringBoard Mathematics is a highly engaging, student-centered instructional program" (SpringBoard, 2014). In this program students will be able to apply mathematical skills to real-world matters and explain and reason their answers. Students will work directly with the Common Core State Standards and the eight standards for mathematical practices which will help prepare them for PARCC and NWEA.

Course Expectations:

1. Attendance is extremely important in order to keep up with the rigorous demand of material. Students will have to make up missing work in a timely manner.
2. Students are expected to be in their seats and ready to begin when class starts.
3. **Pencils only will be used for math** – No pens, markers, or erasable pens will be accepted. Please make sure all students are prepared with pencils throughout the entire year.
4. Students are required to come prepared with all materials. Students should come to class with their binder, agenda book and at least two pencils.
5. Students are expected to actively participate in class by writing down all examples done in class, asking questions and answering questions. The examples and worksheets we do in class will serve as a resource to the students. Students will have a math journal as well as their textbook where notes, math terminology, worksheets etc. will be kept.

Textbook/Workbook

All textbooks will be kept at school. Students are to maintain respectable care for the textbooks during classroom instruction. If students need their math notebooks/textbooks to help complete homework or study for a test they will be allowed to take it home. All textbooks and notebooks need to come back to class the next day. Students are actively writing in their textbooks and notebooks and we will not have extra if a student does not come prepared to class.

Homework/Agenda Books

Students will **always** have homework Monday thru Thursday. Only in the rare circumstance that there is a quiz or unit assessment on Monday, students will be assigned a review homework on Friday.

Students are required to record your homework each night in your agenda book. Homework will be collected and checked every day. It is the student's responsibility to complete homework each night and turn it in at the beginning of class. Study hall will take place every day after school from 2:50-3:30pm. If students do not complete a homework assignment, they will be invited to mandatory study hall after school that day. Students must turn in the completed homework the next day in order to receive half credit.

Class Dojo

We will be using class dojo as a way to address student behaviors, upload class photos and share important information. While using class dojo you will be able to receive immediate updates on your students behavior in class. Students will receive *demerits* when their actions do not meet school/class expectations. Students will receive *merits* when their actions meet and go above and beyond school/class expectations. Merits and demerits will alter the students behavior percentage. This percentage is used for school incentives such as the middle school dances, LGP levels and no uniform day.

Grading Plan

Quizzes – 30%

Unit Assessment – 30%

Classwork & Participation – 30%

Homework – 10%

Pacing

6th grade Advanced Math is rigorous and fast-paced. Students must have strong fundamental math skills to be able to access the content material.

Successful students know:

- Multiplication tables up to 12
- Division tables up to 12
- Rounding & Estimation

Let me know if you need any resources to strengthen these skills at home.

Units of Study- 6th Grade Units:

Unit 1: Number Concepts

- Comparing and Ordering whole numbers, decimals and fractions (Including mixed numbers)
- Adding, subtracting, multiplying and dividing decimals
- Prime factorization, greatest common multiple, least common multiple

Unit 2: Integers (Positive and negative whole numbers)

- Placing integers (Positive and negative whole numbers) on the number line
- Comparing and ordering integers
- Adding, subtracting, multiplying and dividing integers

Unit 3: Ratio and Proportions

- Proportional relationships
- Converting between measurements using ratios
- Calculating unit rates and rates of speed

Unit 4a: Expressions

- Order of operations (PEMDAS)
- Writing and evaluating algebraic expressions Ex.) $3x + 4$

Unit 4b: Equations

- Representing Situations with equations
- Writing and solving equations. Ex.) $3x + 4 = 16$

Unit 5a: Geometry – Area

- Properties of triangles, side lengths and angle measures.
- Recalling Quadrilaterals
- Area and perimeter of composite figures
- Area of polygons on a coordinate plane

Unit 5b: Geometry – Volume

- Nets and surface area of cubes
- Volume of cubes
- Volume of rectangular prisms

Unit 6: Data Analysis

- Survey questions/variability
- Graphs – Box plots and histograms
- Mean, median, and mode and outliers
- Mean absolute deviation (MAD)
- Interquartile range (IQR)

Units of Study- 7th Grade Units:

Unit 1: Rational Numbers

- Comparing and Ordering whole numbers, decimals and fractions (Including negative numbers)
- Adding, subtracting, multiplying and dividing positive and negative fractions and decimals

Unit 3: Ratio and Proportions

- Proportional Reasoning: Rate of change
- Percent, sales tax, commission and percent error

Unit 4a: Geometry – Circles

- Properties of Circles
- Informal Theorems to develop formulas for circumference & area of a circle

Unit 4b: Geometry – Surface Area & Volume

- Area and perimeter of composite figures
- Volume of prisms
- Cross Sections of Prisms & Pyramids

Unit 5: Probability

- Theoretical Probability
- Experimental Probability
- Law of Large Numbers
- Random Digit Simulations.