

Math 6 Syllabus - League Academy

Teacher: Mrs. Nelson

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Course Title: Math 6

Textbook Title: McGraw Hill Course One

Course Scope and Sequence:

Understanding the World Around Us Through Statistics

This unit focuses on creating a deeper understanding of variability, using measures of center and measures of spread to describe and compare data distributions. This unit will use box plots to represent and analyze data distributions. Students will: summarize, describe, and interpret data in box plots; determine and use medians and modes of data sets; identify and use range and interquartile range to describe a data set and use measures of variation to compare two data sets; divide multi-digit whole number and decimals; choose appropriate measure of center and variation to describe and interpret data.

Ratios and Rates

Students begin formally exploring ratios, rates, and percents as comparative tools, progressing to more abstract representations. Specifically, students will understand ratios as a comparison of quantities. They apply ratio reasoning to solve problems, understand rates as a kind of ratio that compares quantities that may have different units and understand percentages as a kind of ratio with a whole always equal to 100.

Understand and Use Percentages

This unit focuses on developing an understanding of the concept of percentages. The unit will connect what students learned about ratios and rate reasoning to percent of a whole.

Solve Area, Surface Area, and Volume Problems

This unit focuses on students' geometric and spatial thinking in the real world. Students formalize their understanding by visualizing, composing and decomposing figures to develop area formulas. They visualize edges and faces of 3-D figures that are not visible from the viewpoint used to draw them. The concepts of area, surface area, and volume are introduced. Students will find the area of parallelograms, rhombuses, triangles, trapezoids, and polygons by composing or decomposing figures into other figures or using a formula, determine volumes of rectangular prisms using unit cubes or a formula, make nets for 3-D figures and identify 3-D figures based on nets, and determine surface area of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids. In addition to this, students use a protractor to measure angles, add and subtract angle measures to find new angle measures, use the definition of complementary and supplementary angles to find angle measures.

Numerical and Algebraic Expressions

In this unit, students will learn to solve problems involving fractions, whole numbers, and mixed numbers using equations and models. They will write and evaluate numerical and algebraic expressions using exponents and the order of operations. Students will explore how to identify and create equivalent expressions using properties of operations and find the greatest common factor (GCF) and least common multiple (LCM). Through this, they will build foundational skills in numeric expressions that prepare them for future work with algebraic expressions and universal mathematical properties.

Integers, Rational Numbers, and the Coordinate Plane

This unit focuses on extending students' understanding of rational numbers to include negative numbers. Students will be introduced to all four quadrants of the coordinate plane in this unit. Students will: explore locations of rational numbers and their opposites on a number line; explore absolute value; use the number line to compare and order rational numbers; plot points on the coordinate plane and describe the location of points; find the distance between points on the coordinate plane; find side lengths of polygons on the coordinate plane using absolute value.

Equations and Inequalities

This unit builds on the study of algebraic expressions that we started earlier in the year.. Students will understand that an equation with a variable has a solution: a number that makes the equation true. They will also understand that an inequality has a solution set. Students will write and solve equations involving one variable; write and solve one-step equations using all four operations; write inequalities to represent real-world and mathematical problems; draw number lines graphs to represent inequalities and use substitution to test solutions.

Relationships Between Two Variables

This unit focuses on quantitative relationships between two variables. Students build on their knowledge of cause and effect and modeling it with a two-variable relationship. Students recognize that two variable quantitative relationships exist in many facets of our lives with applications such as money, distance, time, etc. Students will identify independent and dependent variables, find the value of the dependent variable given a relationship between two quantities, use tables and graphs to find and analyze the relationship between two quantities and to write an equation to show the relationship between independent and dependent variables, write an equation to show the relationship between two quantities and then use it to solve a problem.

Operations with Integers

Students will add, subtract, multiply, and divide integers.

Materials Needed for Course:

- Textbook
- Blue composition notebook
- Blue plastic folder with prongs
- pencils
- Colored pencils/markers
- Glue stick

Classroom Expectations:

While in my classroom, I expect students to:

- Have their materials (math notebook, folder, Chromebook) daily
- Wear their IDs at all times
- Follow teacher directions and participate in class activities
- No phones will be allowed in class
- Follow the social contract

Grading Policy/Practices:

Grading Percentages are based on Greenville School District Guidelines:

- ❖ 50% Major Assessments (tests, problem-based projects)
- ❖ 50% Minor Assessments (classwork, quizzes)

Grading Scale

A = 90 -100 B=89 - 80 C=79 - 70 D= 69 - 60 F= 59 and below

Assignments turned in more than 5 days late will receive an NHI (Not Handed In); which will result in a 0%.

Retakes:

If a student earns a grade on a major assessment that they are not satisfied with, they will have the opportunity to retake the assessment. Students will need to fill out a reflection sheet, get it signed by parent/guardian, and schedule a time to retake the assessment with me within a week. The retake will cover the same standards as the original assessment, but it will not be the exact assessment as the original.

Homework:

Homework often is work that was not completed in class. Students should review their notes daily as well.