

Course: 8th Grade Algebra Accelerated
Instructor: Mrs. Sepe
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Year: 2016-2017

Course Description:

This first year **Algebra** course, aligned with the newly adopted New Jersey Student Learning Standards, is intended to have the student develop the skills necessary to solve problems while emphasizing the many structural ways to arrive at the solution. Upon entering this course, students are expected to be fluent in their ability to complete operations with rational numbers (decimals, fractions, percents, integers) without a calculator. The course is similar to the Algebra Horizon curriculum, however, the topics are covered at a slower pace which will allow time for intervention as needed. Students will experience engaging activities that encompass a variety of grouping styles, offering students a wide array of learning opportunities to exchange ideas and develop the ability to communicate and reason mathematically. Mathematics will be expanded into and integrated with other subjects. Instructional emphasis is placed on the development of critical thinking skills and algebraic problem solving skills which provide the foundation for real world problem-solving.

The curriculum focuses on five critical areas:

- (1) Developing fluency in writing, interpreting, and translating between various forms of linear equations and inequalities, and using them to solve problems.
- (2) Understanding function notation, interpreting functions graphically, numerically, symbolically, and verbally, translating between representations and understanding the limitations of various representations.
- (3) Extending the properties of exponents to rational exponents and comparing and contrasting linear and exponential functions.
- (4) Applying an understanding of data in order to create linear models for data.
- (5) Extending understanding of functions to quadratic functions and creating and solving quadratic equations.

In addition, to the new content standards, students will also apply the eight Standards for Mathematical Practice throughout the course. These practices rest on important "processes and proficiencies" with longstanding importance in mathematics education.

Technology is incorporated throughout the year, including but not limited to: use of a TI-83 Plus graphing calculator, Publisher on-line resources and SMART Board where appropriate.

Textbook: *Big Ideas Math Algebra 1*, Larson, R. Boswell, Copyright 2015 by Big Ideas Learning, LLC.

