SOUTHERN LEHIGH SCHOOL DISTRICT
5775 Main Street
Center Valley, PA 18034

Planned Course for Mathematics

Course: Grade 8 Mathematics

Standards:
This course is aligned to standards within the follow Domains of the PA Core Standards:

8.NS	The Number System
8.EE	Expressions and Equations
8.F	Functions
8.G	Geometry
8.SP	Statistics and Probability

Course Description:
The K-12 mathematics program within Southern Lehigh School District will provide opportunities for all students to develop the ability to independently apply mathematical knowledge and skills to real-world situations. A robust and coherent curriculum will prepare students to think and reason mathematically while requiring them to demonstrate a deep understanding of mathematics. Students will develop critical thinking, problem solving, innovation, collaboration, and communication skills. A focus will be placed on using mathematics as a key to understanding the world, in order to meet the challenges of a dynamic society.

GRADE 8 MATHEMATICS focuses on five mathematical domains: (1) The Number System, (2) Expressions and Equations, (3) Functions, (4) Geometry, and (5) Statistics and Probability. Students will focus on formulating and reasoning about expressions and equations. This will include modeling an association in bivariate data with a linear equation, and solving linear equations, as well as systems of linear equations. Students will build an understanding of a function and work with using functions to describe quantitative relationships. Additionally, two- and three dimensional space and figures using distance, angle, similarity, and congruence will be explored. Students will develop an understanding of and ability to apply the Pythagorean Theorem.

Measurable objectives to be attained by students:
Specific objectives for this course are aligned to the Pennsylvania Core Standards for Mathematics and the Common Core State Standards for Mathematics as outlined in the Scope and Sequence for Grade 8 Mathematics.

Instructional Strategies:
Below is a list of suggested strategies for high-quality instruction in mathematics:

- Instructional components outlined in the *Framework for Teaching* by Charlotte Danielson
- Use Concrete Representational Abstract (CRA) representations
- Promote productive struggle
- Promote mathematical discourse
- Use precise mathematical language

Estimated Instructional Time:
Approximately 46 minutes per day for one school year

Forms of Assessment to Measure Attainment of Course Objectives:

- Universal Screener
- Progress Monitoring
- Diagnostic Assessments
- Curriculum-based measures
- Benchmark Assessments
- Formative Assessments
- Summative Assessments

Resources:

Student Text Resources:
Larson, Ron, and Laurie Boswell. *Big Ideas Math: Modeling Real Life Common Core Grade 8*. Big Ideas Learning, LLC, 2019.

- Student Text Printed Version
- Student Text Online Version
- Student Journal

Teacher Resources:
Larson, Ron, and Laurie Boswell. *Big Ideas Math: Modeling Real Life Common Core Grade 8*. Big Ideas Learning, LLC, 2019.

- Teacher's Guide Printed Version with Online Access
- Assessment Book
- Resources by Chapter
- Rich Math Tasks
- Skills Review Handbook

Technology:
District approved supplemental technology

Other Resources:
Manipulatives
Teacher created resources
District approved supplemental resources