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

Planned Course for Mathematics

Course: Honors Geometry

Standards:
This course is aligned to standards within the following Domains of the PA Core Standards:
HS.A   Geometry
HS.C   Functions

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.

HONORS GEOMETRY focuses on developing an understanding of the attributes and relationships of geometric objects. This course is designed for students who have achieved high levels in math. It provides an integrated study of congruence, similarity, geometric transformations, geometric measurement and dimension, right triangles, introductory trigonometry, circles, parallelism, and spatial relationships. Both abstract and practical aspects of geometry are addressed. Throughout this course, inductive and deductive reasoning are emphasized in both mathematical and non-mathematical situations. The major principles of logic are emphasized, while developing the method and meaning of mathematical proof. Students will construct conditional statements, conjectures, and written justifications. Both direct and indirect proofs are used to provide an understanding of two- and three-dimensional relationships. **Summer work is required for this course.**

Prerequisite(s):
- Earn a minimum grade of an A- in Algebra I or an A- in Middle School Algebra I

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 Geometry.

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:
77 minutes per day on an alternating A/B block schedule for one school year

Forms of Assessment to Measure Attainment of Course Objectives:

- Curriculum-based measures
- Benchmark Assessments
- Formative Assessments
- Summative Assessments

Resources:

Student Text Resources:
Larson, Ron, and Laurie Boswell. *Big Ideas Math: A Common Core Curriculum Geometry*. 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: A Common Core Curriculum Geometry*. Big Ideas Learning, LLC, 2019.
- Teacher's Guide Printed Version with Online Access
- Assessment Book
- Resources by Chapter

Technology:
- Scientific calculator
- District approved supplemental technology

Other Resources:
- Manipulatives
- Teacher created resources
- District approved supplemental resources