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

Planned Course for Mathematics

Course: Trigonometry

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

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.

TRIGONOMETRY is a study of the theory and application of periodic functions related to angles and lengths of a triangle. Students will expand their knowledge of the basic trigonometric functions and go beyond what they have previously learned in mathematics courses. Students will explore additional trigonometric functions and their connection to each other, both graphically and algebraically. A variety of trigonometric applications will be explored. The use of fundamental trigonometric identities, double and half angle formulas, graphs of circular functions and problems involving oblique triangles will also be covered.

Prerequisite(s):
- Successful completion of a Geometry course

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 Trigonometry.

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 semester

Forms of Assessment to Measure Attainment of Course Objectives:

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

Resources:

Student Text Resources:
Blitzer, Robert. *Algebra and Trigonometry*. Pearson, 2018.

- Student Text Printed Version
- Student Text Online Version

Teacher Resources:
Blitzer, Robert. *Algebra and Trigonometry*. Pearson, 2018.

- Teacher's Guide Printed Version

Technology:
Graphing calculator
District approved supplemental technology

Other Resources:
Teacher created resources
District approved supplemental resources