



# Southern Lehigh School District

## High School Syllabus

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### Geometry 2014-2015

#### Course Description:

This course introduces the basic concepts, terminology, and notations involved in geometry. Both abstract and practical aspects are covered. Conditional statements, conjectures, theorems, and written justifications are systematically brought into the course, along with the subjects to which they pertain. Students construct an understanding by spending some of their class time working in collaborative learning groups on investigations. Spatial, or solid, Geometry is interwoven progressively with plane Geometry, rather than brought in either separately or at the end of the course. Strong emphasis is placed on developing a logical manner of thinking and the use of technology. Daily review of Algebraic concepts is employed throughout the course. In this way, Algebra skills are maintained and the students are better prepared to enter into Advanced Algebra, and Calculus courses. A scientific calculator is required for this course.

#### Course Content:

The following concepts will be covered over the two semesters:

- Geometric Terms and Symbols
- Inductive and Deductive Reasoning
- Geometric Tools
- Lines and Angles
- Triangles
- Circles
- Polygons
- Two Column Proofs
- Area and Volume
- Similarity
- Trigonometry

#### Required Textbooks and/or Other Reading/Research Materials

Michael Serra's *Discovering Geometry* will energize the geometry classroom, involving the students and making them active participants in their own learning. Students explore geometric relationships with a wide variety of tools, including compasses, computers, and graphing calculators. Instead of just memorizing rules and definitions, students perform constructions, measure figures, observe patterns, discuss their findings, write their own definitions, and formulate their own geometric conjectures.

*Discovering Geometry: An Investigative Approach, Third Edition.* by Michael Serra. Springer-Verlag  
New York, LCC, 2002.

#### Course Requirements:

Prerequisite: Algebra I with a minimum grade of "C" recommended. Each student is required to complete all tests, projects and assignments. Failure to do so will affect the student's overall grade.

Grade Components/Assessments:

Grades will be based on a point system that will be converted to overall percentages.  
The following methods will be used, for the year, to assess and evaluate student performance.

Tests: 50 – 60%  
Quizzes: 20 – 25%  
Homework: 20 – 25%  
Alternative Assessment: 5 – 10%

Each marking period is worth 20% of a student's overall grade. The final is worth 20% of a student's overall average:

Quarter 1	20%
Quarter 2	20%
Quarter 3	20%
Quarter 4	20%
<b>Final</b>	<b>20%</b>

Required Summer Reading/Assignments:

There are no required summer reading assignments.

