

Queens Academy High School

Department of Mathematics

Geometry Course Curriculum – Part 1

Teacher: _____

Course Description

This is the first course of a three-part mathematical curriculum in Geometry, designed to facilitate understanding of the fundamental concepts and properties of two and three dimensional shapes. At the end of this course, students will be able to apply the properties of lines, angles and shapes, along with inductive and deductive reasoning, to establish congruency of shapes. Technology will also be used profusely to allow students to relate abstract mathematical understandings to the real world. Euclidean tools will also be used to facilitate a deeper understanding of geometrical properties of lines, angles and shapes.

Text Book

Geometry Revised (Paperback), by Isidore Dressler and published by Amsco, will be the essential text that will be used for this course. However, any other appropriate geometry text can also be used as supplementary material.

Materials

Straight Edges, Compasses, Protractors, Pens, Pencils, Polygon Templates and Graphing Calculators.

Topics to be Covered

Unit 1 – Tools of Geometry (21 Days)	# of Days
• Patterns and Inductive Reasoning.....	2
• Drawings, Nets and other Models.....	3
• Points, lines and Planes	3
• Segments, Rays, Parallel Lines and Planes	3
• Measuring Segments.....	2
• Measuring Angles1	1
• Basic Constructions.....	2
• The Coordinate Plane.....	2
• Perimeter, Area and Circumference	3

Unit 2 – Reasoning and Proof (11 Days)

- Conditional Statements.....2
- Biconditionals and Definitions.....2
- Deductive Reasoning.....2
- Reasoning in Algebra.....2
- Proving Angles Congruent.....3

Unit 3 – Parallel and Perpendicular Lines (19 Days)

- Properties of Parallel Lines.....4
- Proving Lines Parallel.....2
- Parallel and Perpendicular lines.....2
- Parallel Lines and the Triangle Angle-Sum Theorem.....3
- The Polygon Angle-Sum Theorem.....2
- Lines in the Coordinate Plane.....2
- Slopes of Parallel and Perpendicular Lines.....2
- Constructing Parallel and Perpendicular Lines.....2

Unit 4 – Congruent Triangles (14 Days)

- Congruent Figures.....2
- Triangle Congruence by SSS and SAS.....2
- Triangle Congruence by ASA and AAS.....2
- Using Congruent Triangles: CPCTC.....2
- Isosceles and Equilateral Triangles.....2
- Congruence in Right Triangles.....2
- Using Corresponding Parts of Congruent Triangles.....2

Assessment

Assessment for this course will be based on various criteria of which attendance and class participation are of utmost importance. Through engagement in differentiated instruction and group activities, students will be able to immediately resolve any problems they may encounter while solving problems. Homework, also will be an integral part of their daily assessment, hence, it should be completed and submitted in a timely fashion. Quizzes, Projects, Regular Testing, Midterm and a Final Exam Exam will also be used as assessment tools.

Classwork and Participation	15%
Homework	15%
Quizzes and Projects	20%
Midterm	20%
Final	30%