Saddlebrook Preparatory School
Geometry Honors - Syllabus
2004 – 2005

Instructor: Mr. Dom Gualtieri (Mr.G)
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Course Description

Prior math courses through Algebra I stress the numerical core concepts of mathematics. This course will encourage the development of spatial and inductive thinking skills and their application to theoretical and real life situations. Students will actively use their knowledge and skills in hands-on activities to construct an understanding of geometry and as a foundation for future mathematics courses.

To be successful in this course, students must be active learners willing to show intellectual curiosity and commit time and energy to learning.

Textbook

Geometry – Glencoe (McGraw-Hill)

Course Objectives

After successfully completing this course, the student will be able to:

1. Use inductive reasoning skills to solve a variety of theoretical and real world problems.
2. Classify geometric shapes according to geometric criteria.
3. Construct two and three-dimensional objects using geometric properties and tools such as a protractor, compass, and ruler.
4. Define key geometric terms.
5. Describe real life applications of geometric concepts.
6. Define and find measurements such as area, volume, perimeter, and surface area.
7. Use known properties to create and test new conjectures.
8. Use coordinate geometry to create and manipulate geometric figures.
9. Describe attributes of a shape including symmetry.
10. Use deductive reasoning in the creation of geometric proofs.

Course Outline Plan

Geometry Honor students will complete Chapter 13 in addition to the twelve chapters assigned to the regular Geometry class. Additional homework and assignments follow by quarter.

Quarter 1 --- Chapters 1 – 3 and 4.1 thru 4.3

Enrichment Masters (Glencoe – Geometry) for enhancing student critical thinking for application and problem solving will be employed. These enrichment project titles follow:

Coordinate Pictures	Points and Lines on Matrix	Perimeter/Area of Irregulars
Lengths of a Grid	Construction Problem	Optical Illusions

Curve Stitching	Venn Diagrams	Geometry Crossword Puzzle
Bisecting a Hidden Angle	Perspective Drawings	More Optical Illusions
The Mobius Strip	Parallelism in Space	Toothpick Puzzles

Quarter 2 --- Chapters 4 – 6 and 7.1 thru 7.5

Enrichment Masters (Glencoe – Geometry) for enhancing student critical thinking for application and problem solving will be employed. These enrichment project titles follow:

Map Projections	How Many Triangles?	Triangle Challenges
Incribed/Circumscribed Circle	Polygon Puzzles	Tessellations
Counting Squares	Counting Rectangles	Kites
Scale Drawings	Ratio Puzzles with Triangles	Constructing Similar Polygons
Golden Rectangles	Pythagorean Puzzles	Sine and Cosine of Angles

Quarter 3 --- Chapters 7 – 10

Enrichment Masters (Glencoe – Geometry) for enhancing student critical thinking for application and problem solving will be employed. These enrichment project titles follow:

Right Triangle Converse	Identities	Square Root Constructions
The Four Color Problem	Measuring Angles	Chord Patterns
Regular Polygon Formulas	Magic Circles	Tangent Circles
The Nine Point Circle	The Unit Circle	Constructing a Decagon

Quarter 4 --- Chapters 11 - 13

Enrichment Masters (Glencoe – Geometry) for enhancing student critical thinking for application and problem solving will be employed. These enrichment project titles follow:

Polygonal Numbers	Area of Parallelograms	Heron's Formula
Aerial Surveyors	Polygon Probability	Can-didly Speaking
Cross Sections of Prisms	Conic Sections	Doubling Sizes
Prism Puzzles	Absolute Zero	Equations of Angles
Parabolas	Similar Circles	Finding the Center of Rotation

Materials

1. A Student Math Portfolio for maintaining homework, classwork, and other course materials as detailed under Student Expectations.
2. Pencils with erasers – no pens will be allowed. Please have two sharpened ones ready each day when you get to class.
3. Calculator – the TI-30 is a good one to use.
4. Compass, ruler, and protractor.

Grading Scale

100 – 90 = A
89 – 80 = B
79 – 70 = C
69 – 60 = D
59 – 0 = F

Assessment

- Student Math Portfolio (Homework) 25%
- Tests & Quizzes 60%
- Class Participation 5%
- Math Application Process Projects 10%

Student Expectations

1. Each student should maintain a Student Math Portfolio which may be either a three-ring binder or a regular notebook with Sections or Separation Dividers for:

   - Homework Assignments (completed and corrected)
   - Classwork Assignments (completed and corrected)
   - Class Notes
   - Tests and Quizzes
   - Special Projects
   - Math Disciplinary Write-Ups and Warnings

2. Each document in each section of the Student Math Portfolio should be arranged by date starting with the first assignment. Mr. G may randomly select a student's Portfolio for inspection and adherence to standards at any time during the class period.

3. Prior to commencing any written classwork or homework assignments, each student is expected to review the appropriate class notes and reading/reference materials. The Student Math Portfolio, sharpened pencils, ruler, and assigned math textbook should be with the student during math class.

4. Upon arrival to class, each student is to enter quietly; immediately sit at her or his assigned seat; open their text and Student Math Portfolio to the appropriate page. Each student should remain quiet throughout the class period, speaking only when called upon by Mr. G.

5. Throughout the class period, each student will adhere to the Rules and Regulations set forth in the most current Saddlebrook Preparatory School "Student-Parent Handbook 2004/2005". Mr. G will not tolerate disrespect between a student or a teacher, nor will he tolerate disrespect between one student and another.

Contract Understanding

As a student at Saddlebrook Preparatory School, I, the undersigned, have read and understand the contents of Mr. G's **Geometry Honors Syllabus** and I promise to make every effort to adhere to these standards in my pursuit for knowledge and of mathematics. I will maintain the Student Math Portfolio doing my homework an d classwork diligently. I will use the Saddlebrook Parent-Student Handbook as my guide in adhering to the school rules and regulations. I am especially aware of the need to act in a professional and adult manner during class and throughout the school day. I understand that mutual respect towards teachers and students is mandatory.

It is with this understanding that I sign below:

Student Signature: _____ Date: _____

Please provide me with the following information for communicating to both you and your parent (guardian).

Student Email Address: _____

Parent or Guardian Email Address: _____

Parent or Guardian Name (printed): _____