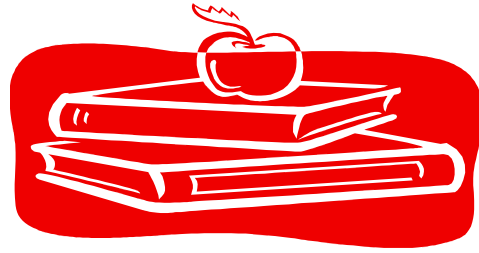


# Mackay Junior/Senior High School



**COURSE:** GEOMETRY

Date: 08/17/11

Teacher with contact information: Mrs. Sharleece Lambson

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## COURSE DESCRIPTION

The main purpose of the geometry curriculum is to develop geometric skills and concepts, and the ability to construct logical arguments and proofs and solve problems in geometric settings. The main focus will be devoted primarily to plane Euclidean geometry, studied both synthetically and analytically. The concepts of congruence, similarity, and symmetry can be understood from the perspective of geometric transformations. Other topics include the basic undefined terms, defined terms, relationships and properties of geometric figures (circles, triangles, right triangles, and quadrilaterals), measurements of basic geometric figures and solids. Throughout the course we will be using models, constructions tools, algebra, writing logical proofs of explanation using inductive and deductive reasoning to describe geometric shapes.

The course will begin with a quick assessment and review of basic prerequisite skills. Unit One will begin by building geometric structure (Tools of geometry, reasoning and proof, and parallel and perpendicular lines. Unit Two will cover topics of congruence of triangles, quadrilaterals, and relationships in congruent triangles. Unit Three covers similarity of triangles and special triangles using proportion. Trigonometry is introduced and applied to triangles. Understanding similarity in terms of similarity transformations. Unit Four covers topics of measurement (area, volume, surface area) of polygons and circles and a more in depth understanding and application of circle theorem.

Please note that revisions may be made to this document throughout the year.

## COMMON CORE / STATE CONTENT STANDARDS/VOCABULARY OBJECTIVES

Please note that revisions will be made throughout the year.

- Identify and model points, lines, and planes. (G-CO) no.1
- Identify intersecting lines and planes. (G-CO) no.1

- Make geometric constructions with various tools. (G-CO) no.12
- Find distances between points and midpoints of line segments. (G-GMD)
- Identify angle relationships. ( G-CO) no.9
- Find perimeters, areas, surface areas, and volumes. 2-Dim and 3-Dim figures. (G-GMD)
- Make conjectures and find counterexamples for statements.
- Use deductive reasoning to reach valid conclusions.
- Write proofs involving segments and angle theorems. (G-CO)
- Identify angle relationships that occur with parallel lines and a transversal and prove lines parallel from given angle relationships. (G-CO)
- Use slope to analyze a line and to write its equation. (G-GPE)
- Find the distance between a point and a line and between two parallel lines. (G-GEP)
- Apply special relationships about the interior and exterior angles of triangles. (G-CO)
- Identify corresponding parts of congruent triangles and prove triangles congruent. (G-CO)
- Learn about the special properties of isosceles and equilateral triangles. (G-CO)
- Learn about special segments and points related to triangles. (G-CO)
- Learn about relationships between the sides and angles of triangles. (G-CO)
- Learn to write indirect proofs. (G-CO)
- Find and use the sum of the measures of the interior and exterior angles of a polygon. (G-CO)
- Recognize and apply properties of quadrilaterals. (G-CO)
- Compare quadrilaterals. (G-SRT) no.11
- Identify similar polygons and use ratios and proportions to solve problems. (G-SRT)
- Identify transformations and identify and apply similarity transformations. (G-CO), G(SRT)
- Use scale models and drawings to solve problems. (G-MG), G(SRT)
- Use the Pythagorean Theorem. (G-SRT)
- Use properties of special right triangles. (G-SRT)
- Use trigonometry to find missing measures of triangles. (G-SRT) no., (G-MG) no.1
- Learn the relationships between central angles, arcs, and inscribed angles in a circle. (G-C)
- Define and use secants and tangents. (G-C)
- Use an equation to identify or describe a circle. (G-GPE)
- Find areas of polygons and circles in more depth and areas of sectors of circles. (G-GMD)

## INSTRUCTIONAL MATERIALS

- Text book Geometry by Glencoe McGraw-Hill

- Two Note book needed in class each day – one for notes and other for assignments
- Pencils- **ABSOLUTELY NO INK PENS**
- Graphing paper
- Scientific Calculator- Must have trigonometric and exponential capabilities.
- Protractors and compasses will be provided unless you would like to bring your own.

## UNITS WITH INSTRUCTIONAL DATES

### Semester 1

- 1-4 Weeks Approx. 8/25/11 - 9/14/11 Tools of Geometry, Reasoning and proof.
- 5-9 Weeks Approx. 10/19/11- 10/20/11 Parallel and Perpendicular lines.
- 10-14 Weeks Approx. 10/24/11 -11/21/11 Congruent Triangles and Relationships in Triangles.
- 15-18 Weeks Approx 11/22/11 – 12/21/11 Relationships in Triangles.

### Semester 2

- 1-4 Weeks Approx. 1/2/12 – 2/06/12 Quadrilaterals
- 5-9 Weeks Approx. 2/07/12 – 3/08/12 Proportions and Similarity
- 10-14 Weeks Approx. 3/12/12 – 4/16/12 Right Triangles and Trigonometry, Transformations and Symmetry and Circles.
- 15-18 Weeks Approx.4/17/12 – 5/24/12 Circles and Areas of Polygons and Circles

## ASSESSMENTS / TESTS

- Notes must be taken from each chapter and turned in before each chapter test. **NOTES ARE ALLOWED DURING TESTS.**
- There will be daily assignments from each section of the chapter. Assignment will be corrected at the beginning of class the following school day. **If the assignment does not completed in class, then student must complete at home.**
- Quick five minute quizzes will be given at the beginning of class. They are designed to assess what they remember from the previous assignments. Quizzes must be taken in class and will **not** be daily.
- In class tests will be given at the end of each chapter.
- Projects (extra credit assignments) will be available at my discretion.

## GRADING PROCEDURES

**Grades are subject to change upon teacher's discretion.**

- Chapter Notes            5 extra points
- Daily assignments        10 points
- Class quizzes            10 points
- Chapter Tests            100 points
- Semester Test            200 points
- Projects (extra credit) points will be available at my discretion.

### CLASS RULES

- All daily assignments must be handed in for grade on **due date**.
- If student is involved with extra-curricular activities, he or she must get their daily assignment before they leave.
- If absent because of doctor appointment or sick, student make call and get what missed assignment or he or she may get the assignment the following school day. Student will be given **2 days** to make up missed assignment.
- If student needs to be removed from class for disruptive behaviors, he or she will get a **zero grade** on that day's assignment.
- **Absolutely no music players or cell phones of any kind are allowed in class.** No exceptions!!
- All quizzes and test must be taken in class. Exceptions are at teacher's discretion.

### MISCELLANEOUS

- Please visit your child's account on **Power School**. All assignment descriptions, due dates, assignment scores, quiz scores, and tests scores are available for you to review your child's progress.
- **Glencoe.com has a website** that has helpful, example problems, notes, practice quizzes tests. Step-1 Connect to glencoe.com. Step 2- go to quick pass code and type in code (GE4849c1) for chapter one. Note that c1 means chapter 1 so for other chapters type "c" then the chapter number you desire. Code is printed on the first page of the students issued book.
- Please contact me if you have any questions or concerns. Contact information is on first page.