Geometry A Syllabus
2016-2017

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WHAT YOU'LL NEED:
- A CALCULATOR!!!!! (TI-30 recommended)
- Pencil, eraser, lined paper

TEXTBOOK:
- We use multiple resources for the Geometry curriculum. We will not be using a textbook for this course. Questions? Struggling? Just ask!

COURSE DESCRIPTION:
Geometry is designed for students who have successfully completed the Glencoe Algebra I class. This is the next step in the Glencoe math series. Students will further develop math skills and continue integrating the areas of mathematical study. Students who study geometry gain skills in drawing, visualizing, and following mathematical algorithms. They also understand properties and mathematical relationships, as well as proofs. Learning Geometry helps you become a better THINKER!

ADDITIONAL INFORMATION:
We will be utilizing Moodle and other web-based applications throughout the school year.
If students do not have computer access at home, there are many options. Computer labs are available during certain school hours and students may use the computers in the libraries at lunch and after school in AAL. There is an additional student computer in the back of my classroom that you may use before and after school as well.

TEACHING FORMAT:
Please come to class on time; class will begin right away! We'll start with a Warm-Up, have time for questions about the previous night's homework, and then jump right in. New lesson(s) will be covered through a variety of learning strategies – including reading, small and large group discussions, cooperative learning, investigative activities, guided notes, etc. Time for practice will be given in class and a short homework assignment will be given on MOST days.

EXTRA HELP!:
- First thing; you need to let me know!
- Sign up, next to my door, for seminar.
- See me to set up a time after school ☺

Class Grade (80% of Final Grade)
Tests (70% of Class Grade) & Quizzes (25% of Class Grade)
There will be one test at the end of each chapter, although some chapters may be broken into smaller unit tests. Likewise, there will be one/two quizzes per chapter. If you are absent on the day of a test/quiz, be prepared to take it on the day you return or after school in AAL. Missing a test/quiz is a big deal, and an assigned AAL might not be convenient for you. Remember that when missing one. A retake, Form B, of any test is available to students who complete the correctives assignment and make arrangements with the teacher.

Homework/Independent Practice (5% of Class Grade)
Students can expect homework every day! It is crucial to complete the assignment and show all steps, thoughts and ideas you used. There is a difference between "doing your homework" and "doing your homework well".

Exam (20% of Final Grade)
Both semesters will culminate with a Final Exam over all topics covered throughout the semester.

SEMESTER OVERVIEW
Units of Study: "Proof"

Tools for Geometry

Students will understand the relationship and properties of point, line, plane, and angles and relate associated concepts to formal definitions. Students will learn how to use physical tools (compass, protractor, ruler, etc.), verbal tools, written tools, and graphical tools in this unit of study.

Algebraic and Geometric Proof

Students will understand and develop formal algebraic and geometric proofs with reasoning and conclusions. Proofs will be written in multiple formats including, but not limited to: paragraph proofs, justifications, and two-column proofs.

Proofs involving Parallel and Perpendicular Lines

Students will understand the concepts of slope, equations of lines, parallelism and perpendicularity, and distance. Students will form formal arguments working with transversals, parallel and perpendicular lines, and slopes.

Triangle Congruence Proof

Students will understand how to classify triangles and prove their congruence, both formally and with rigid motion. Students will investigate congruence with a hands-on approach to create formal geometric proofs of these concepts. Students will also investigate triangle inequalities and the Hinge Theorem and investigate how these relate to triangle congruence.

Transformations

Students will create Isometries (Reflections, Translations, and Rotations) to create congruent figures. Emphasis is placed on the methods of performing these transformations and the properties of shapes that are preserved.

Coordinate Proofs with Quadrilaterals

Students will understand how to classify quadrilaterals and prove the various properties of the quadrilateral family. Students will study the Quadrilateral Hierarchy in depth and investigate the parts of the quadrilateral through coordinate proofs.

CLASSROOM EXPECTATIONS:
1. **P**repared – Have materials ready every day and arrive ready to learn!
2. **R**espectful – Be polite and respect personal space and property.
3. **I**ntegrity – Always do your best… and do your OWN work!
4. **D**ependable – Get to class before the bell rings. Follow all expectations. Clean up after yourself!
5. **E**ffort – Have a positive attitude, and be willing to help others.

Show your Panther **PRIDE!**