geometry

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*official course description:* Geometry is the study of the properties and applications of common geometric figures in two and three dimensions. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Important differences exist between this Geometry course and the historical approach taken in Geometry classes. Transformations are emphasized early in the course and are used to build understanding of triangle congruence. Justifying reasoning is emphasized throughout the course as well as in more formal proofs. Other major topics of the course include circumference, area, and volume, theorems about circles, and trigonometry. Students who complete Geometry should take Algebra II next. A TI-84 calculator is recommended for use in this class and all math classes that follow.

As an honors course, students will be involved in open-ended student-driven investigations, read complex passages to build background and depth, select and integrate appropriate technology into their study, solve challenging, multi-faceted problems, and complete projects relevant to real-world scenarios.

***what do we actually study in here?***Lines and equations, the old and new vocabulary of geometry, transformations (how objects move and change), how to construct a mathematical argument and justify it, what it means when two objects are identical and how to tell, using triangles to solve problems, other more complex kinds of shapes and their special properties, what similarity means and how to apply it to real-world cases, what trigonometry is and the many places it’s used, the interesting properties of circles and intersecting lines, and how to think and work three-dimensionally.

supplies

- 3-ring binder which always contains:

1-subject notebook for notes (should only contain math class notes)

loose leaf notebook paper

loose leaf graph paper

3 tab dividers: Handouts, Homework, Quizzes + Tests

ruler

geometry workbook

- 1-subject composition notebook for daily journals (stays in class)

- Colored pencils; regular writing pencils

- TI-84+ Calculator (in-class set available)

- Protractor and compass for class and home use (some in-class sets available)

- Textbook: Burger, E.B. et al. (2010.) *Geometry.* Holt McDougal.

- \*\*5 dollar math department fee\*\*

**What do I bring each day?** Binder as described, last night’s homework/handouts, textbook, pencils, calculator.

rules

1. Always be kind, to everyone and everything.
2. Come prepared with your materials, including last night’s assignment.
3. Come prepared to **think**.
4. Come prepared to **participate**.
5. Don’t be afraid. (To stop me, to ask me, to ask others, etc.)
6. CCA Handbook rules will be enforced.

work and grades

**At the start of each class, we will have a short assessment (3-5 items).** These are to be done in your daily journals which stay in the classroom. They will usually, but not always, be review, sometimes quite old.

**Homework is practice, and practice is essential. But I will not collect it daily.** Most of our assignments will be problems out of the textbook. You are expected to check the answer to odd-numbered problems in the back of the book, and re-do problems you miss. At the start of each class, I will display the answers to the even-numbered problems in class, where you are expected to correct your mistakes with a red pen. This is your time to ask me and your peers for extra assistance. Assignments are posted on Powerschool. Homework will be given a completion grade of 0, 3, or 5 out of 5, assessed as I walk around the room. Late work will receive a max of 4.

**Every quarter, I will conduct a binder check as a test grade**. If you keep up with your assignments, it is an easy A. It will ask you to refer to specific homeworks and handouts (but not notes) and copy down the solution or other requested information. We will do a “practice” run about a month into the first quarter as a task grade.

**All tests are cumulative**. Of course, the unit’s information will make up the bulk of the test, but expect old material on every test. I will prepare a study guide to help you focus your studying. Error analysis on all tests is required, and its grade weight will be up to my discretion. The final exam counts as 25% of your Spring grade.

Grade breakdown: Homework 10% Teaching Tasks: 40% Tests: 50%

**What if I miss school?** Check the class website (mgeo.weebly.com) for a daily summary and assignment. It is your responsibility to complete the homework and check the answers (which can be done with a peer or with me after school or in DS). I will then change the zero to its proper grade.

policies

DO limit your time out of the classroom. Disruptions affect everyone’s learning. Keep bathroom breaks to a min.

A sign in/out sheet is kept by the door. Please record the time.

DO NOT use your phone as a calculator. We will use phones for research at times, but I will explicitly say when.

DO keep organized. Your binder will help you get the most out of your learning.

DO NOT procrastinate. Getting behind will leave you confused and frustrated, and class will seem like a chore.

DO be prepared to explain your reasoning. Justify *why* as often as possible.

DO NOT be afraid of getting something wrong. Mistakes make new learning.

resources

Online textbook: <http://my.hrw.com> user: nmm4h1 password: geometry

Class website: <http://mgeo.weebly.com>

Good resource: <http://mathopenref.com>

After school tutoring is available. Please let me know in advance when you would like to meet. Directed studies is also ideal for math—I will assign passes as needed, but please ask for one if you wish. For reference, my planning periods are 1B and 2A.