

Geometry

Mr. Kreis

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Fall
2022

Course Description

In this course, students will explore the relationships among points, lines, and planes in space. The concept of logical reasoning and the exploration of complex geometric situations lead students to make formal mathematical arguments. Geometric shapes are described and characterized. Equivalence relations pertaining to geometry such as congruence and similarity, along with spatial, coordinate geometry, circles, spheres, and transformations are studied.

Grading

45% Mastery (6)
40% Progress (at least 24)
15% Final Exam

Students may retake a **Mastery Assessment** (unit test) if they score below a 70%. Mastery assessments could be unit tests, projects or a cumulative assessment for the course. This should be done within 10 days of the original assessment date.

Progress grades can be from classwork, homework, warm-ups, quizzes and/or other work completed for the course.

Work will be considered LATE if submitted after the due date. The deadline for submitted work is 10 days past the due date. Work submitted after the deadline will longer be accepted for credit. Appropriate adjustments will be made for absences.

Expectations*

BE Respectful
BE Present
BE Prepared
BE Mindful

*All policies stated in the school/county handbook will be followed.

Materials

- Binder
- pencils/erasers
- Colored pencils*
- laptop/schoolology*
- Calculator*
- Ruler*
- Patty paper*
- compass/protractor*

*provided in school

There is NO textbook for this course.

Academic Honesty

All students at Queen Anne's County High School are expected to conduct themselves with great pride in academics and the community at large. To this end, it is expected that all students will maintain academic integrity in every assignment. Work must be completed individually unless otherwise directed by the teacher. **Plagiarism** is a severe offense at QACHS and will result in immediate consequences. The use of Photomath and other electronic sources is a form of plagiarism.

Course Topics*

Unit 1: Notation, reasoning, Transformation

Topic 1: Use Inductive Reasoning

Topic 2: Rigid Transformations

Topic 3: Transformations and Coordinate Geometry

Unit 2: Intro Triangles

Topic 4: Deductive reasoning

Topic 6: Lines and Transversal

Topic 7: Properties of Triangles

Topic 8: Special Lines and points in triangles

Unit 3: Triangles and Congruency/Similarity

Topic 9: Congruent triangle postulates

Topic 10: Using congruent triangles

Topic 12: Dilation and Similarity

Topic 13: Applications of Similarity

Unit 4: Discovering Trigonometric Relationships

Topic 14: Pythagorean Theorem

Topic 15: Right Triangle and Trig Relationships

Topic 17: Polygons and special quadrilateral

Unit 5: Circles

Topic 18: Algebraic representation of circles

Topic 19: Chords, arcs, and inscribed angles

Topic 20: Lines and segments on circles

Unit 6: Area and Volume

Topic 21: Modeling with Area

Topic 24: Prisms and cylinders

Topic 25: Pyramids and cones

Topic 23: Volume

*Tentative units

Algebra will be reviewed throughout the course

*Geometry in
the real
world...uses
and careers*

Architects, Drafters, Mechanical Engineers, Surveyors, Construction, Designers, Navigators, Astronomers, Video game designers, and Artists all use Geometry. Can you think of any other careers?

How would you use Geometry in your daily life?

Geometry is all around us in nature, architecture and technology

Schoology Code of Conduct

1. While on Schoology, what I say and how I say it will be school appropriate.
2. I will use posts to discuss school-related content only.
3. I will use a respectful tone of voice when posting. All school rules and consequences related to harassment apply to Schoology.
4. I will use appropriate grammar instead of texting language.
5. I will not reveal any personal information on Schoology. This includes telephone numbers, addresses, emails, etc.

Emergency Procedures

All emergency procedures (fire drills, weather drills, etc.) have been reviewed with the students as they pertain to evacuation and/or shelter in place situations. Each drill's instructions are specific to the classroom location and crisis situation. If you have any questions or concerns about what your student should do in the case of an emergency, please speak to your student and/or email me directly.

Classroom Expectations

§ **Respect for EVERYONE** – Students should respect the classroom, everything and everyone in it.

§ **Daily Preparation**- Students must come to class everyday ready to learn. In order to do so students must have all materials and completed homework assignments. In addition, students should enter the classroom with a positive attitude and outlook ready to learn.

§ **Following Directions** – Students should read/listen to directions and follow to the best of their ability.

§ **Responsibility**- Students will be able to ensure success by taking full responsibility of their attendance, preparation, class participation, attitude, studying and behavior.

Schedule

Period 1: 7:35 - 9:05

Period 2: 9:10 - 10:40

Period 3: 10:45 - 12:45

Lunch A: 10:45 - 11:15

Lunch B: 11:30 - 12:00

Lunch C: 12:15 - 12:45

Period 4: 12:50 - 2:20

*Other schedules are posted in our classroom

Helpful Resources

DESMOS: Classroom activities and online calculator

<https://www.desmos.com/>

Agile Mind will be used throughout the course for tutorials and practice.