

Geometry Course Syllabus

Central Linn HS 2021-2022

Instructor Information

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General Information

Geometry is a very important branch of mathematics in the modern world. After all, without geometry, life is pointless. Many students find that they enjoy it because, unlike some other types of math, it feels very concrete, since it's rooted in shapes and patterns - things you see every day. We will be building off of things that you learned in middle school, as well as things you see every day in the world around you, to understand the very real ideas of shape, measure, distance, transformation, symmetry .

That being said, we will spend a lot of time in this class studying abstract concepts, as ways to extend those concrete ideas as far as we can. This balance between abstract thinking and concrete modeling proves difficult for many students, but my hope is that, by conquering the challenge, you'll grow as a learner and a mathematicians.

In particular, this class places a strong emphasis on not only applying geometric rules, but understanding and justifying their origins. This represents a higher level of abstract thinking, but it will deepen your understanding of geometric ideas, and thus your ability to apply them to everyday situations.

Which brings me to my philosophy for this class. You will learn geometry best by exploring, discussing, and testing your own mathematical thinking. I try to keep lectures to a minimum, and focus on in-class activities that help you build conceptual understanding of what we're learning. I also try my best not to tell you anything that you can figure out for yourself. In short, lots of discussions, and lots of problem-solving. So come to class with a **growth mindset, a desire to learn, a positive attitude, and a commitment to succeed**, and you'll be in for a wondrous experience!

Course Outline

This course consists of six units, each taking 2-4 weeks:

1. Introduction to modeling with geometry (areas, volumes, densities in the real world)
2. Lines angles, and shapes: basic theorems, their justifications, and their applications.
3. Geometric transformations 1: (rotations, reflections, translations, dilations), treated as functions.
4. Geometric transformations 2 - similarity, congruence, symmetry, and related applications
5. Measurement 1: Distance and area using and coordinate geometry and similarity.
6. Measurement 2: - Right triangle trigonometry using sine, cosine, and tangent
7. The geometric modeling process re-visited (Construction Project)

I will not provide a course calendar here because it will inevitably change anyway. I will work hard to clearly communicate where we are in the timeline of our learning.

Expectations & Policies

In the Classroom

Due to the constantly evolving COVID-19 situation, we will have a combination of lessons inside the classroom and lessons outside on the grass. The expectations are slightly different for these two situations, as outlined below:

This first one's a no-brainer. Treat *yourselves and each other* with respect and kindness. **Strive not to just meet these expectations, but to set an example for others.** This rule applies to me too, and if you feel that I haven't lived up to it, please let me know. The following subsections are just special cases of this rule:

Masks

(Inside): Per state mandate, I must insist that you wear a face covering that covers your mouth and nose while we are inside the classroom. I recognize that this policy may conflict with your personal views. Violating this policy could jeopardize my teaching license and subject me to significant civil penalties. If you are not abiding by this policy, I will ask you to step outside until you put on a mask, and if it continues to be a problem, you will be moved to distance learning. If it becomes a school-wide problem, we may have to return to distance learning as a whole school. Thus, failing to wear a mask indoors is disrespectful to me, your classmates, and yourself. That being said, here's some mask tips to make this as easy as possible:

- Get a mask that's comfy for you! Personally, I like the blue surgical ones, and I've got a stash of those in the classroom if you'd like to try one.
- If it keeps sliding down, tie loops in the strap that you can adjust to the right length. I can show you how if you'd like.

(Outside): While we are outside, you may wear your mask if you wish, or remove it if you'd like! I'm hoping to have lots of outdoor classes while the weather is nice so that I can see everyone's beautiful faces. Note that if you go inside to gather supplies, use the bathroom, etc., you'll need to put on a mask while you're in the building.

Cell Phones

(Inside and outside) If your phone is distracting you from learning, then, well, that's pretty disrespectful to you, and therefore a violation of classroom rules. Therefore, if I catch your cell phone distracting you, then it'll have to spend the rest of the school day with me in detention. If this happens multiple times, it'll have to do its detention in the office, possibly accompanied by a call home.

That being said, cell phones can have legitimate uses in the classroom. For instance, some people prefer to use their phones as calculators, and sometimes we will solve problems that will require you to look up information online. When this is the case, I will let you know. I ask that, if you use your phone in class, you keep it on your desk, rather than under it, so that I can see what it's being used for.

Food and Drink

(Inside): Unfortunately, due to the need to remain masked in the classroom, I have to ask that you save the food for lunchtime. You may, however, bring a beverage, provided that your mask is covering your nose and mouth whenever you are not taking a sip. I ask that your beverages be closed-top. Spills are very difficult to clean up. And since, most likely, I'll make you do the cleaning, you'll want to avoid that situation at all costs.

(Outside): You cannot learn very well if you're hungry or thirsty. You're welcome to have snacks and drinks outside. I ask that your snacks be as quiet and non-fragrant as possible, so as to avoid distracting the people around you. If your snacking gets too distracting, I will ask you to stop. Make sure that you are respecting our lovely outdoor space by cleaning up after yourself.

Bathroom

(Inside and outside): You are welcome to use the bathroom whenever you'd like. There's one right outside the door, so just let me know when you leave so I can keep track of where everyone's at. If it's at a really important moment, I might ask you to wait a minute. I'd rather not have to start policing when and how people use it, so please don't make me by abusing this privilege.

(These policies are subject to change in accordance to COVID-19 safety restrictions).

Email Policy

Email me any time! You can generally expect a reply in less than a day. If it's over a weekend, I may not reply until Monday.

I tend to show a preference for emails that display professionalism. That means proper punctuation, spelling, and formatting. That's not a hard requirement, but in your future academic or professional career, it will be. Just food for thought.

Homework Policy

The primary purpose of homework in this class is *not* to practice skills over and over again. It is for you to *extend and expand* your knowledge that you've started building in class. I will also ask you to reflect on what the key ideas we learned in the week are, and what questions you have about what you've learned. Therefore, I see homework as an important part of your learning in this class, and it is required. **It is much more important to use homework to ask questions than it is to know the answers.**

Homework assignments will generally be assigned on Monday and due Thursday. They will consist of about 2-4 math problems and 2 self-reflective questions. The math problems will tend to be conceptual and broad, rather than procedural. I will pick one problem to grade on correctness, and the rest will be graded on effort. This means that the worst grade a mindfully completed homework assignment will receive is a "3."

Grading

Your grade in this class will be divided into two categories: Assessments, and Effort, Citizenship, and Participation:

Assessments (80%): There will be two assessments every unit (7 Units total). They are as follows:

1. Homework: We will have a homework assignment most weeks of class (see Homework Policy). Your homework grades from each unit will be averaged, and count as one assessment for that unit.
2. Celebration of Knowledge: These cumulative unit assessments will usually follow the format of a test - however, we may have one or two projects throughout the semester. (see Assessment Policy)

Effort, citizenship, and participation (20%): "Do, each day, more than what's expected of you." This is your opportunity to self-reflect on how well you're learning in this class. Once again, strive not to simply meet this expectation, but to set an example for your classmates. Twice during the semester, you will meet one-on-one with me to self-assess how you've done in this category (see "Effort, Citizenship, and Participation Rubric"). *You will be grading yourself* based on:

- How diligently you've worked on in-class assignments.

- How well you've worked with table-mates during group assignments.
- Whether or not you've been asking questions or seeking extra help when you get stuck.
- Whether or not you've worked to help your classmates when you see opportunities to.
- Whether or not you've been coming to Friday school when (1) you need some support or (2) I ask you to.

To keep you updated on your progress, we will complete a short reflection on these things about once per unit.

Grading Scale

Below is the grading rubric used by all classes taught at Central Linn High School for assessments:

- Z = assessment was not submitted
 - R = assessment was received and being graded
 - 0 = incomplete, not enough evidence to assess
 - 1 = does not yet meet standard/learning target
 - 2 = nearly meets standard/learning target
 - 3 = meets standard/learning target
 - 4 = exceeds standard/learning target
- In this system, there is no "extra credit"

In order to display proficiency on a standard or learning target, a student must attain a 70% or better on the assigned assessment, which is equivalent to a traditional 'C' grade. The traditional 'D' grade will no longer be awarded to student work. If an assessment is below a 70% score, the student will have the opportunity to retake the assessment and get additional support from the classroom teacher or building support services. If all or most standards are not met with passing scores within a grading period, a student may earn an 'F'. However, if a student is making adequate progress toward proficiency and utilizing available resources, students may be assigned an 'incomplete', as decided by the teacher.

Assessment Policies

Students will take assessments in class that show whether or not they have met the standards. If you do not meet or exceed the standard on an assessment, you will need to practice and retake another assessment. **Retakes will not take place during class time unless approved by me.** Additionally, grades for every re-take of assessments will be entered into the gradebook until the standards have been met.

Students who share information or who leave the room without permission during a testing period will receive a failing grade on the assessment. They will be asked to take another assessment during a time arranged with the instructor, outside of class. Students must try all the problems on an assessment to receive a passing grade. Incomplete assessments will need to be re-taken.

Friday School

Friday school is part of the “effort, citizenship, and participation” category of your grade. In short, you need to come to Friday school if:

- You’re looking for extra support related to anything in the class.
- You need to make up an assessment that you did not pass.
- You have any missing assignments.
- You’ve missed class, and you need to get caught up.

Geometry Syllabus Signature Page

Please detach this page, keep the syllabus, and turn this page in to Mr. Rise by Friday, September 10th, 2021.

I have read and understood all of the information given in the course syllabus, including the general expectations, cell phone policy, food and drink policy, email policy, grading policy, and assessment policy.

Student Printed Name: _____

Student Signature: _____ Date: _____

Parent/Guardian Signature: _____ Date: _____

Parent/Guardian Email: _____

Parent/Guardian Phone Number: _____

Type of phone: work cell home

Preferred method of contact: phone email

Preferred time of contact: _____