



Course Syllabus

Franklin High School		2020-2021
Course Overview		
Course Title: Geometry 1/2		
Instructor Name: Mitchell Jones	Contact Info: mjones4@pps.net	
Grade Level(s): 9, 10		
Credit Type: (i.e. "science", "elective") mathematics	# of credits per semester: 1	
Prerequisites (if applicable):		
<p>General Course Description: The course is structured around problems and investigations that build the conceptual understanding of algebraic topics and an awareness of connections. There are strong threads woven throughout the course on multiple representations and the meaning of a solution. Students will be asked to justify their thinking, generalize relationships, make connections between ideas and reverse thinking to solve problems. A major focus of Algebra 1-2 is to develop multiple strategies to solve problems and to recognize multiple ways of understanding concepts.</p>		
<p><u>Prioritized National/State Standards:</u></p> <p><u>HSG-CO.A. Experiment with transformations in the plane</u></p> <p><u>HSG-CO.B. Understand congruence in terms of rigid motions</u></p> <p><u>HSG-SRT.A. Understand similarity in terms of similarity transformations</u></p> <p><u>HSG-CO.A. Experiment with transformations in the plane</u></p> <p><u>HSG-CO.A.1. Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.</u></p> <p><u>HSG-CO.B.7. Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.</u></p> <p><u>HSG-CO.B.8. Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.</u></p> <p><u>HSG-SRT.A.2. Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all pairs of angles and the proportionality of all pairs of sides.</u></p> <p><u>HSG-SRT.A.3. Use the properties of similarity transformations to establish the AA criterion for similarity of triangles.</u></p>		



HSG-SRT.C.6. Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.

HSG-SRT.C.8. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

HSG-GPE.B.6. Find the point on a directed line segment between two given points that divide the segment in a given ratio.

HSG-GPE.B.7. Use coordinates to compute perimeters of polygons and areas for triangles and rectangles, e.g. using the distance formula.

HSG-CO.A.1. Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.

HSG-C.A.2. Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.

HSG-GMD.A.3. Use volume formulas for cylinders, pyramids, cones and spheres to solve problems.

HSG-MG.A.2. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).

Course Details

Learning Expectations

Materials/Texts
-All digital

Course Content and Schedule:

1. Soft start social-emotional learning
2. Transformations
3. Lines and Angles
4. Congruence and Similarity
5. Trig
6. Coordinate Geometry
7. Circles
8. Solids

Differentiation/accessibility strategies and supports (TAG, ELL, SpEd, other):
Standards based assessments on a proficiency scale. Flexible timeline for demonstrating proficiency. Multiple attempts to retake and/or revise assessments. Honors credit available for interested students. Clearly posted and chunked agenda, daily learning target(s) and content vocabulary. Investigative, problem-based curricular model to attend to CCSS Mathematical Practices of 'making sense of problems and persevere in solving them'; 'Reason abstractly'; and

'look for and make use of structure,' for example. Explicit instruction using guided notes and teacher-provided notes.

Safety issues and requirements (if applicable):

Classroom norms and expectations:

Students and teachers are expected to be respectful of each other at all times. Students are also expected to work both independently and collaboratively in study teams. Please be to class on time so you do not miss any content. If you do, please reach out to Mitch or a classmate to catch up on missed content. Canvas holds assignments and information relevant for daily study. Students are encouraged to use voice chat and video features but are not required. We understand that everyone's home conditions are different and this is not a possibility for all people. Students should not be multitasking (playing games, watching tv, reading, sleeping) during synchronous class times.

Asynchronous class times are suggested times to complete work. Mitch is available most asynchronous class times in the same meeting space as synchronous times, however there is no expectation that be in class with me. These are essentially extended office hours. I cannot guarantee that I will be available for immediate office hour work during asynchronous works, though I have only missed 1 day at this point in the school year and I will communicate with students if they should expect to see me there. I can always be reached by email and remind and canvas messaging. I will answer communications at any hour if possible, though communication is not guaranteed outside of school hours, 8:00am to 3:45pm

Students and teachers will refer to the Franklin High School Student Climate Guide.

Evidence of Course Completion

Assessment of Progress and Achievement:

Grades should be based on the student's demonstration of understanding of the standards.

Proficiency Grading Scale:

HP - Highly proficient. This roughly translates to an A or B+. To get an HP, students show mastery of subjects beyond the base standards and can apply their knowledge to novel situations. In Synergy grading, this has a range of 3.5 to 4.0 (not to be confused with GPA).

PR - Proficient. This roughly translates to a C or B. Student has met expected standards on subject mastery. 2.5 to 3.4 in Synergy

CP - Close to proficient. This roughly translates to a low C or a D. Students have met standards for most subjects, or is close to meeting standards 2.0 to 2.4 in Synergy

DP - Developing proficiency. This roughly translates to an F. Students are working towards meeting standards

Daily classwork (formative assessment). Flexible timeline for demonstrating proficiency. Multiple attempts to retake and/or revise tests (summative assessments). Students can use notes on tests.

Grades will be weighted as follows:

Tests and Projects (summative assessments): 90%

Homework Practice (formative assessments): 10%

These are subject to change. I want to reevaluate this grading scale with student feedback

Progress Reports/Report Cards (what a grade means):

Grades should be based on the student's demonstration of understanding of the standards.

Standards-based assessments for proficiency grading

Communication with Parent/Guardian

What methods are used to communicate curriculum, successes, concerns, etc.?

Teacher will use email, Remind App and texts to connect, share successes, curriculum and concerns.

Personal Statement and other needed info

I believe that math education should reflect the students that are learning it. Math is a tool that helps describe countless systems around us, from economy, to nature, to social inequities. Helping students practice the use of these tools is vital to their liberation and independence. I base my practice foremost in personal relationship building. People learn better when they feel comfortable with one another. With this established, mutual support between teacher and students creates a decentralized learning community. Student voice is incredibly important to me, and honoring and centering inherently helps to build a more responsive classroom.