

Geometry

Syllabus 2017-2018

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Period 1 and 5

Check your grades:

This is a two semester course in which students learn geometry properties. Students also further develop their skills in algebra and are introduced to key concepts in the following areas: trigonometry; Pythagorean Theorem, quadrilateral properties etc.

You have all proven that you belong in this class based on hard work and passing your math portfolio presentations. In this class you will need to study and do your homework. This course culminates in a math panel presentation in January.

Prerequisite: completion of Algebra and portfolio presentations.

I want this class to be as successful as possible. To achieve this, I want everyone to work hard and be proud of the learning they are doing. You have the right to be respected by your teacher and classmates, but you must also show respect to others as well as to the learning process.

Semester 1: Unit Names with Essential Questions:

1. Pythagorean Theorem, distance and midpoint
 - a. How do we use the Pythagorean Theorem and distance formula to find the length of sides of a triangle?
 - b. How do we find the midpoint between two coordinate points?
2. Trigonometric Ratios
 - a. How do we find the lengths of a right triangle given an angle and a side?
 - b. How do we apply trigonometric ratios in word problems?
 - c. How do we find angles of a right triangle using the sides?
3. Angles
 - a. How do we find missing angles in a triangle?
 - b. How do we find missing angles in a polygon?
 - c. How do we find angles created by a transversal cutting two parallel lines?
 - d. How do we construct bisector and perpendicular bisectors?

Semester One Major Panel Project Assessment:

1. How Tall is the Building Project

Semester 2: Unit Names with Essential Questions:

1. Properties of polygons
 - a. What are the properties of triangles?
 - b. What are the properties of quadrilaterals?
 - c. Project: School Project
2. Perimeter, Area, Surface area and volume
 - a. How do we find the perimeter of 2D objects?
 - b. How do we find the area of a 2D object?
 - c. How do we find the volume of a 3D object?
 - d. Project: Water Crisis Project
3. Transformations
 - a. How do we transform images? Coordinate geometry
 - b. Project: Transformation Project

Semester Essential Questions:

1. How are the properties of angles used in the “real” world?
2. How are Math and Art Related?
3. What are angle relationships and how do I use them to solve for missing angles?
4. How do I use a compass to create geometric segments?
5. What is a proof and how do I perform formal and informal proofs?
6. How do I use algebra to help me find missing measurements in Geometry?
7. What happens when a plane intersects two parallel lines?
8. What is and how do I solve problems dealing with compound Loci?
9. How do I use a compass to construct and justify perpendicular and parallel lines?
10. How do I write and argue a formal proof?

11. What are the methods of proving triangles congruent?
12. How do I determine if lines are parallel or perpendicular?
13. What are the properties of triangles?
14. What properties do similar triangles have?

Semester Essential Questions:

1. How can problem solving help us examine and solve historical mathematical problems?
2. How are the various mathematical representations related (words, equations, graphs, tables, equations)?
3. How can we use the various mathematical representations to model problems?

Expectations as an FHS Student

We have high expectations for our students. Your teachers, advisors and all staff members believe that you have the capacity to be successful academically and achieve your dreams. We also want you to understand that as an FHS is a safe learning community and we believe that all students can be upstanders and use their voices to create positive change for themselves, their loved ones and their communities. In order to maintain such a learning community, the following are some important expectations of you as a student:

- **NO PHYSICAL FIGHTING OR PLAY FIGHTING:** You have the right to feel safe in school. So do your peers. You also need to learn to solve problems and compromise respectfully without fighting. FHS is a professional learning community so even play fighting is not acceptable behavior as it does not demonstrate professionalism and can often lead to accidents or fights.
- **COME EVERY DAY IN FHS DRESS CODE:** FHS is a professional learning community and we expect you to dress for success! Your clothing demonstrates professionalism and will help prepare you for college and careers in the future.
- **COME TO SCHOOL EVERYDAY:** Your attendance is key to your academic success. You need to be present not only to learn the necessary material, but to be a part of the school community and to add to class and advisory discussions. You are expected to maintain at least a 90% attendance average in school. That means at most, you should only miss one out of every 10 days, or 4 days a cycle. You get out of school at 1:30 on Wednesdays, so all non-emergency appointments should be made during this time.
- **PRACTICE RESPECTFUL LANGUAGE AND BEHAVIOR:** FHS is a safe learning community. We value your unique, individual identity and want you to appreciate and value the identities of your community members. We are a bully-free zone, which means that you will respect all members of our community and will use positive and tolerant language within the school community, including Facebook and other online forums. You will not use language to make fun of or hurt another member of the community. This includes insults, cursing, racist, or homophobic remarks. Language is powerful. You need to be accountable for your words and understand the impact of your words on others. We believe that language should be used to build relationships and positive learning communities and not used for harm.
- **DO YOUR BEST AND BE AN ACTIVE PARTICIPANT IN YOUR EDUCATION:** Everyday that you walk through our school doors, you have made the choice to learn. You have made the choice to work towards your dreams. So when you are in school, you also need to choose to do your best in classes. We are here to help and support you. You are not expected to know everything in class, or to always know what the best choices are in a situation – you are here to learn those things. But we do expect that you are patient with yourself and others while you are learning, that you ask for and accept help when you need it, that you try and take risks, and that you contribute to classes in a positive, respectful

manner.

- **CHOOSE TO BE AN UPSTANDER:** An upstander is someone who makes choices that help not only themselves, but better the lives of others. Upstanders do the right thing in moments of injustice. Upstanders choose to help others in need, speak up for people when they cannot speak up for themselves and speak up when they see something that is unfair. An upstander works to create positive change for themselves, their loved ones and their communities.

Layered Curriculum

The purpose of this layered curriculum is to make you, the student, responsible for your own learning. Coming to class and simply completing “something” will no longer qualify for a passing grade. Much of what you will learn **MUST** be **orally defended**. In other words, you must be able to have a discussion with the teacher about what you learned. In addition, you are assessed on what you have learned everyday. It is your responsibility to get additional help what you need it. Tutoring days will be announced week 2 of classes. Please make sure you attend tutoring if you are not doing well on your daily quizzes. Remember it is not what you say you know, but how well you can show you know the content. Your grades are mostly based on how well you show you understand the material.

FHS Common Grading Policy:

- **Learning Activities (homework, classwork, participation):** at least 60-80 graded, entered assignments a semester
 - 60 learning activities = 3 graded, entered assignments a week/20 per progress report
 - 80 learning activities = 4 graded, entered assignments a week/approximately 26 per progress report
- **Formative Assessments:** at least 8-10 a semester
- **Summative Assessments:** at least 4-6 summative assessments a semester

Grades are given in report cards 2x a year along with a narrative about student skills, content knowledge and strengths and challenges. Twice a semester (4x a year), students also receive progress reports.

Classroom Independence/Interdependence

Please do not be late to class. Once in class your participation is required. If you are absent you must make up your missed work. Full class participation includes arriving on time and being ready to work. If you are not, then points may be deducted from your daily participation grade.

Homework

Students have homework every night. Students are expected to complete whatever work was not completed during the class period in preparation for the following day. In addition, if all classwork was completed, students should use the resources on pupilpath and google classroom as a homework and preparation for the next day.

*****Deadlines are strictly enforced.** We have a lot to do to prepare for the Math Panel. It is crucial to make sure you meet all deadlines. Failure to meet deadlines will result in ineligibility to present your Panel. It is your responsibility to setup an appointment to meet with your teacher for tutoring on your project.***

September 2018

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5 MATH AUTOBIOGRA PHY	6 SCIENCE BEHIND LEARNING	7 MATHEMATI CAL PRACTICE	8
9	10 NO SCHOOL	11 NO SCHOOL	12 SYLLABUS SCAVENGER HUNT	13 PROBLEM OF THE DAY	14 FIELD DAY	15
16	17 ORDER OF OPERATI ONS	18 ALGEBRA EXPRESSIO NS	19 NO SCHOOL	20 SOLVING EQUATIONS	21 SOLVING ANGLES	22
23	24 FORMATI VE	25 INTRODUCT ION TO ANGLES	26 ANGLE CLASSIFICATI ON	27 ANGLE MEASUREME NTS	28 BISECTOR	29
30						

October 2018

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6

	BISECTOR	SUPPLEMEN TARY ANGLES	COMPLEMEN TARY ANGLES	WORK PROBLEMS	VERTICAL ANGLES	
7	8 NO SCHOOL	9 TRANSVERS AL	10 TRANSVERAL	11 TRANSVERS AL	12 REVIEW	13
14	15 SUMMATIVE	16 ELEVATION AND DEPRESSION OF ANGLES	17 INTRODUCTI ON TO PYTHAGORE AN THEOREM	18 PYTHAGOR EAN THEOREM	19 PYTHAGOR EAN THEOREM	20
21	22 PYTHAGORE AN THEOREM	23 FORMATIVE ASSESMEN T	24 INTRODUCTI ON TO TRIGONOMET RY	25 APPLYING TRIGONOM ETRY	26 TRIGONOM ETRY RATIOS	27
28	29 SOLVING TRIGONOME TRIC RATIOS	30 SOLVING TRIGONOME TRIC RATIOS	31 SOLVING TRIGONOMET RIC RATIOS			

November 2018

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3

				ANGLE OF ELEVATIO N SCENARIO	ANGLE OF DEPRESSIONS SCENARIO	
4	5 SEMINAR	6 NO SCHOOL	7 SCENARIO	8 TASKS	9 REVIEW	10
11	12 EXAM	13 INTRODUCE PANEL PROJECT - SAMPLE EXAMPLES	14 PANEL – ROOF DAY	15 BEGIN WORKING ON THE PANEL	16 PANEL WORK PERIOD	17
18	19 PANEL WORK PERIOD	20 PANEL WORK PERIOD	21 PANEL WORK PERIOD DRAFT ONE IS DUE	22	23	24
25	26 LAST DAY TO GET TEACHER FEEDBACK	27 PANEL WORK DAY – TEACHER EDITS	28 PANEL WORK DAY – TEACHER EDITS	29 PANEL WORK DAY – TEACHER EDITS	30 PANEL WORK DAY – TEACHER EDITS	

December 2018

Sunday Monday Tuesday Wednesday Thursday Friday Saturday

						1
2	3 PANEL WORK DAY – INTRODUCE PAIRS	4 ALL SECOND DRAFTS ARE DUE	5 DEPARTMEN T READS	6 TEAM UP WITH PAIR TO BEGIN PPT	7 BEGIN PPT	8
9	10 PPT WORK PERIOD	11 PPT WORK PERIOD	12 PPT WORK PERIOD	13 PPT WORK PERIOD	14 PPT ARE DUE	15
16	17 TASKS PROJECT AND EXTRA CREDIT ASSIGNMEN T	18 TASKS PROJECT AND EXTRA CREDIT ASSIGNMEN T	19 TASKS PROJECT AND EXTRA CREDIT ASSIGNMEN T	20 TASKS PROJECT AND EXTRA CREDIT ASSIGNMEN T	21 TASKS PROJEC T DUE	22
23	24 NO SCHOOL	25 NO SCHOOL	26 NO SCHOOL	27 NO SCHOOL	28 NO SCHOOL	29
30	31 NO SCHOOL					

January 2019

Sunday Monday Tuesday Wednesday Thursday Friday Saturday

		1 NO SCHOOL	2 FINAL EDITS & EXTRA CREDIT DUE	3 FINAL EDITS TEACHER CHECK IN	4 FINAL EDITS	5
6	7 CONTENT QUESTIONS	8 CONTENT QUESTIONS	9 REVIEW	10 REVIEW	11 SUMMATIV E ASSESSMEN T	12
13	14 MOCK PRESENTAT ION	15 MOCK PRESENTAT ION	16 MOCK PRESENTATI ON	17 ALL DRAFTS MUST BE SUBMITTED	18 MOCK PRESENTAT ION	19
20	21 NO SCHOOL	22 PANEL PRESENTAT ION	23 PANEL PRESENTATI ON	24 PANEL PRESENTATI ON	25 PANEL PRESENTAT ION	26
27	28 NO SCHOOL	29 SPRING TERM BEGINS	30 INTRODUCTI ON TO AREA AND PERIMETER	31 INTRODUCTI ON TO AREA AND PERIMETER		

If you have any questions we can be reached by phone at (212) 757-2680 or by email at

maria@facinghistoryschool.org. If you can, please provide your email address below so that we can contact you via email. We look forward to a successful and rewarding semester.

Please return this portion to your teacher

Student Name: _____

Student Email Address: _____

Parent/Guardian Name: _____

Home Phone: _____

Cell Phone: _____

Parent/Guardian Email Address: _____

I have read the above contract and expectations and will do my best to follow the rules and be a successful student in this class.

Student Signature: _____

I have read the above contract and expectations and will do my best to help my child to follow the rules and be a successful student in this class.

Parent/Guardian Signature: _____