

High School Syllabus

Department: Mathematics
Course Title: Practical Geometry

Course #:40422B

DESCRIPTION OF COURSE: This geometry course will emphasize a hands-on approach to concepts using models, activities, and dynamic geometric software. Students will understand and demonstrate concepts of perpendicular and parallel lines and planes, congruent and similar polygons, right triangles, circles and arcs, area and volume of plane and solid figures, and deductive and inductive reasoning. Students will demonstrate their achievement through homework, classwork, tests, quizzes and projects. Students will take the Practical Geometry final exam at the end of the course.

REQUIRED TOPICS OF STUDY	SUGGESTED INSTRUCTIONAL TIME	STANDARDS/ ELIGIBLE CONTENT
Inductive Reasoning	2 weeks	CC.2.3.HS.A.3, G.1.3.2.1
Introducing Geometry	4 weeks	CC.2.3.HS.A.3
Constructions	1 week	CC.2.3.HS.A.4
Line and Angle Relationships	3 weeks	CC.2.3.8.A.2, G.2.2.1.1, G.2.2.1.2, G.2.1.2.2, G.2.1.2.3, G.2.1.2.1
Similarity	2 weeks	CC.2.3.HS.A.6, G.1.3.1.2, G.1.3.1.1
Triangle Properties	4 weeks	CC.2.3.HS.A.3, G.1.2.1.1, G.1.2.1.3, G.1.3.1.1, G.1.2.1.2, G.1.2.1.4
Polygon Properties	4 weeks	CC.2.3.HS.A.3, G.2.2.2.2, G.2.2.2.3, G.1.3.1.1
Circle Properties	4 weeks	CC.2.3.HS.A.8, G.1.1.1.1, G.1.1.1.2, G.1.1.1.3
Transformations	2 weeks	CC.2.3.HS.A.2, CC.2.3.HS.A.1, G.1.3.1.1, G.1.3.1.2

REQUIRED TOPICS OF STUDY	SUGGESTED INSTRUCTIONAL TIME	STANDARDS/ ELIGIBLE CONTENT
Area	3 weeks	CC.2.3.HS.A.14, CC.2.2.HS.C.1, G.2.2.4.1, G.2.3.1.1, G.2.3.1.2, G.2.3.1.3, G.2.2.2.4, G.2.2.2.1, G.2.2.2.2, G.2.2.2.3
Surface Area and Volume	3 weeks	CC.2.3.8.A.1, CC.2.3.HS.A.12, G.2.3.1.1, G.2.3.1.2, G.2.3.1.3
Pythagorean Theorem	2 weeks	CC.2.3.8.A.3, G.2.1.1.1
Trigonometry	2 weeks	CC.2.2.HS.C.9, CC.2.3.HS.A.7, G.2.1.1.1, G.2.1.1.2

RESOURCES: Serra, Michael. Discovering Geometry. California: Key Curriculum Press, 4th edition.

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