

Geometry Syllabus

(Syllabus subject to change)

St. Augustine High School
Room C-118

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Textbook
Geometry-Texas Edition
McDougal Littell
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In Geometry, students will develop reasoning and problem solving skills as they study topics such as congruence and similarity, and apply properties of lines, triangles, quadrilaterals, and circles. Students will also develop problem solving skills by using length, perimeter, area, circumference, surface area, and volume to solve real-world problems.

This course will involve hands-on applications, technology based exploration and the integration of algebra skills and is designed to provide a strong foundation in mathematics to help students develop the content and problem solving skills needed for success in college, careers, and daily life.

COURSE OBJECTIVES	TEXTBOOK PAGE RESOURCES
The student will be able to:	
1. identify points, lines, and planes	Chapter 1- pp. 2-8
2. use segments and congruence	Chapter 1- pp. 9-14
3. use midpoint and distance formulas	Chapter 1 –pp. 15-22
4. measure and classify angles	Chapter 1 –pp 24-32
5. describe angle pair relationships	Chapter 1 –pp 35-41
6. classify polygons	Chapter 1 –pp 42-47
7. find perimeter, circumference, and area	Chapter 1 –pp 49-56

8. use inductive reasoning	Chapter 2 – pp. 72-78
9. analyze conditional statements	Chapter 2 – pp. 79-85
10. apply deductive reasoning	Chapter 2 – pp. 87-93
11. use postulates and diagrams	Chapter 2 – pp. 96-102
12. reason using properties from algebra	Chapter 2 – pp. 105-111
13. prove statements about segments and angles	Chapter 2 – pp. 112-119
14. prove angle pair relationships	Chapter 2 – pp. 124-131
15. identify pairs of lines and angles	Chapter 3 – pp. 147-152
16. use parallel lines and transversals	Chapter 3 – pp. 154-160
17. prove lines are parallel	Chapter 3 – pp. 161-169
18. find and use slopes of lines	Chapter 3 – pp. 171-178
19. write and graph equations of lines	Chapter 3 – pp. 180-187
20. prove theorems about perpendicular lines	Chapter 3 – pp. 190-197
21. apply triangle sum properties	Chapter 4 – pp. 217-224
22. apply congruence and triangles	Chapter 4 – pp. 225-231
23. prove triangles congruent by SSS	Chapter 4 – pp. 234-239
24. prove triangles congruent by SAS and HL	Chapter 4 – pp. 240-246
25. prove triangles congruent by ASA and AAS	Chapter 4 – pp. 249-255
26. use congruent triangles	Chapter 4 – pp. 256-263
27. use isosceles and equilateral triangles	Chapter 4 – pp. 264-270
28. perform congruence transformations	Chapter 4 – pp. 272-279
29. use properties of midsegments and write coordinate proofs	Chapter 5 – pp. 295-301
30. use perpendicular bisectors	Chapter 5 – pp. 303-309

31. use angle bisectors of triangles	Chapter 5 – pp. 310-316
32. use medians and altitudes	Chapter 5 – pp. 319-325
33. use inequalities in a triangle	Chapter 5 – pp. 328-334
34. solve problems by writing and solving proportions	Chapter 6 – pp. 356-363
35. use proportions to solve geometry problems	Chapter 6 – pp. 364-370
36. use proportions to identify similar polygons	Chapter 6 – pp. 372-379
37. prove triangles similar by AA	Chapter 6 – pp. 381-387
38. prove triangles similar by SSS and SAS	Chapter 6 – pp. 388-395
39. perform similarity transformations	Chapter 6 – pp. 409-415
40. explore the properties of fractals	Chapter 6 – pp. 406-407
41. apply the Pythagorean Theorem	Chapter 7 – pp. 433-439
42. use the converse of the Pythagorean theorem	Chapter 7 – pp. 441-447
43. use similar right triangles	Chapter 7 – pp. 449-456
44. use the relationships among the sides in special right triangles	Chapter 7 – pp. 457-464
45. apply the tangent ratio	Chapter 7 – pp. 466-472
46. apply the sine and cosine ratios	Chapter 7 – pp. 473-480
47. use inverse tangent, sine, and cosine ratios	Chapter 7 – pp. 483-489
48. use trigonometry with acute and obtuse triangles(Laws of Sines and Laws of Cosines)	Chapter 7 – pp. 490-491
49. find angle measures in polygons	Chapter 8 – pp. 507-513
50. use properties of parallelograms	Chapter 8 – pp. 515-521

51. use properties to show that a quadrilateral is a parallelogram	Chapter 8 – pp. 522-529
52. use properties of rhombuses, rectangles, and squares	Chapter 8 – pp. 533-540
53. use properties of trapezoids and kites	Chapter 8 – pp. 542-549
54. identify special quadrilaterals	Chapter 8 – pp. 552-557
55. translate figures and use vectors	Chapter 9 – pp.572-579
56. perform reflections	Chapter 9 – pp. 589-596
57. perform rotations	Chapter 9 – pp. 598-605
58. identify and perform dilations	Chapter 9 – pp. 626-632
59. use properties of tangents	Chapter 10 – pp. 651-658
60. find arc measures	Chapter 10 – pp. 659-663
61. apply properties of chords	Chapter 10 – pp. 664-670
62. use inscribed angles and polygons	Chapter 10 – pp. 672-679
63. apply other angle relationships in circles	Chapter 10 – pp. 680-686
64. find segment lengths in circles	Chapter 10 – pp. 689-695
65. write and graph equations of circles	Chapter 10 – pp. 699-705
66. find areas of triangles and parallelograms	Chapter 11 – pp. 720-726
67. find areas of trapezoids, rhombuses, and kites	Chapter 11 – pp. 730-736
68. use ratios to find areas and perimeters of similar figures	Chapter 11 – pp. 737-743
69. find circumference and arc length	Chapter 11 – pp. 746-752
70. find areas of circles and sectors	Chapter 11 – pp. 755-761
71. find areas of regular polygons	Chapter 11 – pp. 762-769
72. identify solids	Chapter 12 – pp. 794-801
73. find the surface area of prisms and cylinders	Chapter 12 – pp 803-809
74. find the surface area of	Chapter 12 – pp 810-817

pyramids and cones	
75. find the volume of prisms and cylinders	Chapter 12 – pp 819-825
76. find the volume of pyramids and cones	Chapter 12 – pp 829-836
77. find the surface area and volume of spheres	Chapter 12 – pp 838-845
78. explore similar solids	Chapter 12 – pp 847-854

Daily assignments will count for 10% of the grade.

Quizzes will count for 30% of the grade.

Tests will count for 60% of the grade.

Missed assignments, quizzes, or tests should be made up within two school days. Arrangements need to be made with the teacher about when this can be done.

Students needing more help outside the class time should make arrangements with the teacher either from 7:30-7:55 AM or 3:15-4:00 PM.