

# Plane and Functional **GEOMETRY**

**2007**

**SUMMER  
SCHOOL  
Credit Recovery**

# **SCOPE & SEQUENCE**



Redlands Unified School District

# ACKNOWLEDGEMENTS

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REDLANDS UNIFIED SCHOOL DISTRICT  
*SCOPE AND SEQUENCE*  
Competency-Based/Credit-Recovery Program

TEXTBOOKS & MATERIALS:

English – *Timeless Voices, Timeless Themes* by Prentice Hall, Writing and Grammar Exercise Workbook and Student Packet  
World History – *Modern World History: Patterns of Interaction* by McDougal-Littell  
US History – *The Americans: Reconstruction to the 21<sup>st</sup> Century* by McDougal-Littell  
Earth Science – *Earth Science* by McDougal-Littell  
Biology – *Modern Biology* by Holt, Rinehart, Winston  
Algebra I – *Algebra I Concepts and Skills* by McDougal-Littell  
Functional Algebra I – *Algebra I Concepts and Skills* by McDougal-Littell and Student Packet  
Geometry – *Geometry* by McDougal-Littell  
Algebra II – *Algebra 2* by Glencoe

INTRODUCTION:

The curriculum for the competency-based Credit-Recovery Program was developed by committees of high school teachers. The curriculum was designed to focus solely on essential State Standards as defined by the blueprints for the California Standards Tests and the California High School Exit Exam. With this in mind, teachers must use the *Scope and Sequence* as the core of their instruction. Everything in the *Scope and Sequence* must be presented according to the timeline specified for each unit of study. *The Credit-Recovery Scope & Sequence* presents the curriculum in six defined units (3 units per semester). The Test Support column specifies core lessons in **bold**. Lessons in italics are optional. Additionally, there may be suggested support lessons for English Language Learners contained within a double box. There may also be suggested tutorial or extra support lessons contained within a dotted box. The Standard column specifies the essential standards to be addressed with each lesson or group of lessons. **While other standards may be secondarily addressed with the core lessons, only those standards that are included on the competency assessment for that unit are listed and must be explicitly taught.**

The heading of each unit specifies the pacing for that unit in terms of number of summer school days as well as how that breaks down in terms of hours. Each summer school day is 4.75 hours broken into two sessions with a 15 minute break between them. Therefore, if a unit specifies 3.5 days, the expectation is for that unit to be completed by the end of Session 1 on the fourth day and that the next unit will begin after the break during Session 2 of the fourth day. Administering the competency assessment is to be included in the time allotted for each unit.

The competency assessment is to be given at the end of each unit within a reasonable time frame to stay on track for completion of all three semester units. Each competency assessment should be administered according to the testing schedule provided by the site administrator. All assessments should be administered in a quiet environment. Students are to complete the assessments individually with no open notes, open books, or calculators.

For more details regarding instruction and assessment for the competency-based program refer to the document on Program Procedures, Policies & Guidelines.



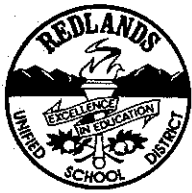
**Redlands Unified School District**  
**SCOPE & SEQUENCE: Geometry**  
**Summer School – Credit Recovery**

Geometry

Semester 1

Standard	Text Support
	<b>UNIT 1 – (3.5 days/15.75 hours)</b>
<p>3.0 Students construct and judge the validity of a logical argument and give counterexamples to disprove a statement.</p> <p>13.0 Students prove relationships between angles in polygons by using properties of complementary, supplementary, vertical, and exterior angles.</p> <p>17.0 Students prove theorems by using coordinate geometry, including the midpoint of a line segment, the distance formula, and various forms of equations of lines and circles.</p>	<p><u>Chapter 1 “Basics of Geometry”</u></p> <p><b>Section 1.1 “Patterns and Inductive Reasoning,”</b> TE pp. 3-9</p> <p><b>Section 1.2 “Points, Lines and Planes,”</b> TE pp. 10-16</p> <p><b>Section 1.3 “Segments and Their Measures,”</b> TE pp. 17-24</p> <p><b>Section 1.4 “Angles and Their Measures,”</b> TE pp. 26-32</p> <p><b>Section 1.5 “Segment and Angle Bisectors,”</b> TE pp. 34-41</p> <p><b>Section 1.6 “Angle Pair Relationships,”</b> TE pp. 44-50</p>
<p>3.0 Students construct and judge the validity of a logical argument and give counterexamples to disprove a statement.</p>	<p><u>Chapter 2 “Reasoning and Proof”</u></p> <p><b>Section 2.1 “Conditional Statements,”</b> TE pp. 71-78</p> <p><b>Section 2.3 “Deductive Reasoning,”</b> TE pp. 86-95</p> <p><b>Section 2.4 “Reasoning with Algebraic Properties,”</b> TE pp. 96-101</p> <p><b>UNIT 1 COMPETENCY ASSESSMENT</b></p>
	<b>UNIT 2 – (4.5 days/20.25 hours)</b>
<p>2.0 Students write geometric proofs, including proofs by contradiction.</p> <p>7.0 Students prove and use theorems involving the properties of parallel lines cut by a transversal, the properties of quadrilaterals, and the properties of circles.</p>	<p><u>Chapter 3 “Perpendicular and Parallel Lines”</u></p> <p><b>Section 3.1 “Lines and Angles,”</b> TE pp. 129-134</p> <p><b>Section 3.3 “Parallel Lines and Transversals,”</b> TE pp. 142-149</p> <p><b>Section 3.4 “Proving Lines are Parallel,”</b> TE pp. 150-156</p> <p><b>Section 3.6 “Parallel Lines in the Coordinate Plane,”</b> pp. 165-171</p>

Standard	Text Support
<p>4.0 Students prove basic theorems involving congruence and similarity.</p> <p>5.0 Students prove that triangles are congruent or similar, and they are able to use the concept of corresponding parts of congruent triangles.</p>	<p><b>Section 3.7 “Perpendicular Lines in the Coordinate Plane,” TE pp. 172-178</b></p> <p><u>Chapter 4 “Congruent Triangles”</u></p> <p><b>Section 4.1 “Triangles and Angles,” TE pp. 193-201</b>  <b>Section 4.2 “Congruence and Triangles,” TE pp. 202-210</b>  <b>Section 4.3 “Proving Triangles are Congruent: SSS and SAS,” TE pp. 211-219</b>  <b>Section 4.4 “Proving Triangles are Congruent: ASA and AAS,” TE pp. 220-228</b>  <b>Section 4.6 “Isosceles, Equilateral, and Right Triangles,” TE pp. 236-242</b></p> <p><b>UNIT 2 COMPETENCY ASSESSMENT</b></p>
<p><b>UNIT 3 – (3 days/13.5 hours)</b></p>	
<p>16.0 Students perform basic constructions with a straightedge and compass, such as angle bisectors, perpendicular bisectors, and the line parallel to a given line through a point off the line.</p> <p>17.0 Students prove theorems by using coordinate geometry, including the midpoint of a line segment, the distance formula, and various forms of equations of lines and circles.</p> <p>12.0 Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.</p> <p>17.0 Students prove theorems by using coordinate geometry, including the midpoint of a line segment, the distance formula, and various forms of equations of lines and circles.</p>	<p><u>Chapter 5 “Properties of Triangles”</u></p> <p><b>Section 5.1 “Perpendiculars and Bisectors,” TE pp. 263-271</b>  <b>Section 5.4 “Midsegment Theorem,” TE pp. 287-293</b>  <b>Section 5.5 “Inequalities in One Triangle,” TE pp. 294-301</b></p> <p><u>Chapter 6 “Quadrilaterals”</u></p> <p><b>Section 6.1 “Polygons,” TE pp. 321-328</b>  <b>Section 6.2 “Properties of Parallelograms,” TE pp. 329-337</b>  <b>Section 6.4 Rhombuses, Rectangles, and Squares TE pp. 347-355</b>  <b>Section 6.5 “Trapezoids and Kites,” TE pp. 356-363</b></p> <p><b>UNIT 3 COMPETENCY ASSESSMENT</b></p>



**Redlands Unified School District**  
**SCOPE & SEQUENCE: Geometry**  
**Summer School – Credit Recovery**

Geometry

Semester 2

Standard	Text Support
<b>UNIT 4 – (3.5 days/15.75 hours)</b>	
22.0 Students know the effect of rigid motions on figures in the coordinate plane and space, including rotations, translations, and reflections.	<p><u>Chapter 7 “Transformations”</u></p> <p>7.2 “Reflections,” TE pp. 403-410            7.3 “Rotations,” TE pp. 411-420            7.4 “Translations and Vectors,” TE 421-428</p>
5.0 Students prove that triangles are congruent or similar, and they are able to use the concept of corresponding parts of congruent triangles.	<p><u>Chapter 8 “Similarity”</u></p> <p>Section 8.1 “Ratio and Proportion,” TE pp. 457-464            Section 8.2 “Problem Solving in Geometry with Proportions,” TE pp. 465-471            Section 8.3 “Similar Polygons,” TE pp. 472-479            Section 8.4 “Similar Triangles,” TE pp. 480-487            Section 8.5 “Proving Triangles are Similar,” TE pp. 488-496            Section 8.6 “Proportions and Similar Triangles,” TE pp. 497-505</p> <p><b>UNIT 4 COMPETENCY ASSESSMENT</b></p>
<b>UNIT 5 – (4.5 days/20.25 hours)</b>	
15.0 Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles.	<p><u>Chapter 9 “Right Triangles and Trigonometry”</u></p> <p>Section 9.2 “The Pythagorean Theorem,” TE pp. 535-541            Section 9.3 “The Converse of the Pythagorean Theorem,” TE pp. 542-549            Section 9.5 “Trigonometric Ratios,” TE pp. 558-566            Section 9.6 “Solving Right Triangles,” TE pp. 567-572</p>
18.0 Students know the definitions of the basic trigonometric functions defined by the angles of a right triangle. They also know and are able to use elementary relationships between them. For example, $\tan(x) = \sin(x)/\cos(x)$ , $(\sin(x))^2 + (\cos(x))^2 = 1$ .	
19.0 Students use trigonometric functions to solve for an unknown length of a side of a right triangle, given an angle and a length of a side.	

Standard	Text Support
<p>21.0 Students prove and solve problems regarding relationships among chords, secants, tangents, inscribed angles, and inscribed and circumscribed polygons of circles.</p>	<p>Chapter 10 "Circles"</p> <p><b>Section 10.1 "Tangents to Circle," TE pp. 595-602</b>  <b>Section 10.2 "Arcs and Chords," TE pp. 603-611</b>  <b>Section 10.3 "Inscribed Angles," TE pp. 612-620</b></p> <p><b>UNIT 5 COMPETENCY ASSESSMENT</b></p>
<p><b>UNIT 6 – (4 days/18 hours)</b></p>	
<p>8.0 Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.</p> <p>12.0 Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.</p>	<p>Chapter 11 "Areas of Polygons and Circles"</p> <p><b>Section 11.1 "Angle Measures in Polygons," TE pp. 661-668</b>  <b>Section 11.2 "Areas of Regular Polygons," TE pp. 669-675</b>  <b>Section 11.4 "Circumference and Arc Length," TE pp. 683-690</b>  <b>Section 11.5 "Areas of Circles and Sectors," TE pp. 691-698</b></p>
<p>8.0 Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.</p> <p>9.0 Students compute the volumes and surface areas of prisms, pyramids, cylinders, cones, and spheres; and students commit to memory the formulas for prisms, pyramids, and cylinders.</p>	<p>Chapter 12 "Surface Area and Volume"</p> <p><b>Section 12.2 "Surface Area of Prisms and Cylinders," TE pp. 727-734</b>  <b>Section 12.3 "Surface Area of Pyramids and Cones," TE pp. 735-742</b>  <b>Section 12.4 "Volume of Prisms and Cylinders," TE pp. 743-750</b>  <b>Section 12.5 "Volume of Pyramids and Cones," TE pp. 751-758</b>  <b>Section 12.6 "Surface Area and Volume of Spheres," TE pp. 759-765</b></p> <p><b>UNIT 6 COMPETENCY ASSESSMENT</b></p>