Mathematics
Geometry CP
Unit 2: Segments and Angles

Essential Understandings	▪ Vertical, complementary, and supplementary angles form special pairs of angles. ▪ Perpendicular lines form right angles. ▪ Supplements angles add up to 90 degrees. ▪ Congruent angles are equal in measure. ▪ Algebraic equations used to solve interior and exterior angles of various geometric shapes. ▪ Perpendicular lines form congruent angles.
Essential Questions	▪ What are some relationships between special pairs of angles? ▪ What are perpendicular lines? ▪ What are the special pairs of angles? ▪ What theorems involve perpendicular lines?
Essential Knowledge	▪ Complementary angles are two angles whose sum is 90 degrees. ▪ Supplementary angles are angles whose sum is 180 degrees. ▪ Vertical pairs of angles are congruent. ▪ Right angles are 90 degrees ▪ Perpendicular lines intersect at 90 degrees. ▪ Supplements angles add up to 90 degrees. ▪ Known angles can be used to reach conclusions about other angles.
Vocabulary	▪ Terms: ○ vertical angles, complementary angles, supplementary angles and perpendicular lines
Essential Skills	▪ Find the measure of an angle from other known angle measures. ▪ Deduce which pairs of angles are congruent, vertical, complementary, or supplementary. ▪ Deduce which pairs of lines are perpendicular.

Mathematics
Geometry CP
Unit 2: Segments and Angles

Related Maine Learning Results	Mathematics C. Geometry Geometric Figures C1. Students justify statements about polygons and solve problems. a. Use the properties of triangles to prove theorems about figures and relationships among figures. b. Solve for missing dimensions based on congruence and similarity. c. Use the Pythagorean Theorem in situations where right triangles are created by adding segments to figures. d. Use the distance formula. C2. Students justify statements about circles and solve problems. a. Use the concepts of central and inscribed angles to solve problems and justify statements. b. Use relationships among arc length and circumference, and areas of circles and sectors to solve problems and justify statements. C3. Students understand and use basic ideas of trigonometry. a. Identify and find the value of trigonometric ratios for angles in right triangles. b. Use trigonometry to solve for missing lengths in right triangles. c. Use inverse trigonometric functions to find missing angles in right triangles. Geometric Measurement C4. Students find the surface area of three-dimensional figures. a. Find the volume and surface area of three-dimensional figures including cones and spheres. b. Determine the effect of changes in linear dimensions on the volume and surface area of similar and other three-dimensional figures.
Sample Lessons And Activities	▪ Students will draw intersecting lines and analyze the measurement of the angles formed by these lines.
Sample Classroom Assessment Methods	▪ Measurement of various angles using a protractor ▪ In class work on the overhead and board to model work ▪ Group work with other students which is evaluated by peers ▪ Quizzes ▪ Tests ▪ Take-home worksheets and tests
Sample Resources	▪ Publications: o Geometry - McDougal Littell

Mathematics
Geometry CP
Unit 2: Segments and Angles
