Math Grade 4 Unit 7
Curriculum Unit Planning Template
Canterbury Public Schools

Subject	Math
Grade Level	4
Unit Title	Angles and Angle Measurement
Unit Goals	Students learn to draw and identify points, rays, segments, angles, and lines, including parallel, perpendicular and intersecting lines. Students learn how to use a protractor to measure angles and draw angles of given measurements, and identify acute, obtuse, right, and straight angles in two dimensional figures. Section A Points, Lines, Segments, Rays and Angles Draw and identify points, lines, rays, segments, and parallel and intersecting lines in geometric figures Recognize that angles are formed wherever two rays share a common endpoint Section B The Size of Angles Recognize that angels can be measured in degrees, and can be found using addition and subtraction Section C Angle Analysis Draw and identify acute, obtuse, right and straight angles in two dimensional figures Write equations to represent angle relationships and reason about and find unknown measurements
Pacing (# of weeks)	5-6 weeks
Standards	4.G.A.1, 4.MD.C.5. 4.NBT.B.4, 4.NBT.B.5 4.G.A.1, 4.MD.C.5, 4.MD.C.5.a, 4. MD.V.5.b, 4.MD.C.6, 4.. MD.C.7, 4.NBT.B.5, 4.NBT.B.6 4.G.A.1, 4.G.A.24.MD.C.6, 4.MD.C.7
Content/Conceptual Knowledge (know)	The language of geometric figures to describe a two- dimensional geometric figure based on attributes Angles can be measured with degrees, as the unit of measurement, and that angles can be composed and decomposed, and therefore additive. An angle is a figure formed when a ray rotates around a vertex shared with another ray.

Skills (be able to do)	Use the language of geometric figures to describe two-dimensional figures with precision Identify and define some building blocks of geometry, points, lines, rays and line segments to develop concepts and language to more precisely describe and reason about other geometric figures Compare The size of angles and consider ways to quantify it. Compare the size of angles, describe angles made by the hour and minute hand of an analog clock, using numbers and tick marks on the clock or units of time to quantify the size of angles.estimate and measure the size of other angles Decompose a right angle into halves = 2 x 45 degrees. Classify angles by their side and identify acute, obtuse, and straight angles.
Essential Questions	How do you measure angles? What makes an angle?
Enduring Understandings	An angle is a figure composed of two rays that share an endpoint Angles can be measured in terms of the amount of turn one ray makes relative to another ray that shares the same vertex A 1 degree angle is 1/360 of a full turn or full circle and can be used to measure angles Angles are additive. When an angle is composed of multiple non-overlapping parts, the measure of the whole is the sum of the angle measures of the parts- Angles are measured in degrees Angle is additive by composing and decomposing angles
Vocabulary	Lines, rays, parallel, angles, perpendicular, points, segments ,obtuse, acute, right, angles, straight angles , intersect, vertex, degrees
Common Learning Experiences	Lesson 3, Activity 2, To Cross or Not to Cross Compare angles and describe their size Draw and manipulate pictures or cutouts of angles Draw and analyze the size of angles Lesson 14, Activity 2, Tick Tock
Assessments	End of unit, classroom activities , cutouts, find the size of angles , daily cool-downs, checkpoints
Resources	Protractors, paper cutouts, patty paper, cutting ,marking and assembling pieces of paper, chart paper, index cards, Do You See What I See?, Card Sort: Who Am I?, Word Wall, rulers, straight edges, Card Sort: Angles, Making a Measuring Tool, Origami paper, How Big Are These Angles?, Make a Change
Strategies	Use a protractor to measure angles in whole-number degrees, use tactile tools and drawings.