Core Content

Cluster Title: Geometric measurement: understand concepts of angle and measure angles.

Standard 6: Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

MASTERY Patterns of Reasoning:

Conceptual:

Students will understand angles are measured in degrees.
Students will understand how to use a protractor to measure angles.
Students will understand that a protractor is an appropriate tool to measure angles.
Students will understand the benchmark angles (i.e., right = 90^0, straight = 180^0, 0^0 < acute < 90^0, 90^0 < obtuse <180^0).
Students will understand how comparing benchmark angles to other angles determines reasonable angle measurements.

Procedural:

Students can measure a variety of angles in whole number degrees using a protractor.

Representational:

Students can represent degrees with the following symbol (^{0}).
Students can draw a variety of angles with specified measures including benchmark angles.

Supports for Teachers

Critical Background Knowledge

Conceptual:

Students will understand that an angle is comprised of two rays with a common endpoint.
Students will understand that angles are measured with reference to a circle at its center at the common endpoint.

Procedural:

Students can identify the parts of the circle and the angle formed by two rays.

Representational:

Students can draw rays and angles.

Academic Vocabulary and Notation

angle, degree, ray, degree symbol (^{0}), protractor

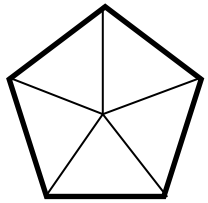
Instructional Strategies Used	Resources Used
Measure angles with a variety of degrees.	http://www.mathopenref.com/

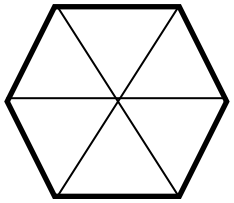
Assessment Tasks Used

Skill-Based Task:

Working with partners, students draw several angles and have partners measure them, and vice versa.

Measure the angles of a regular polygon—students understand that angles are equal.





Problem Task:

Students will locate angles in the classroom or outside. After writing down the angle measurement and item, the students will draw each of the angles found using a protractor.