

GEOMETRY / LESSON OVERVIEW

Objectives

The students will:

- classify triangles and quadrilaterals;
- use a protractor to measure angles;
- use angle measurements to classify acute, obtuse and right;
- differentiate between complementary and supplementary angles;
- demonstrate the Pythagorean Theorem using real life models.

Lesson Summary

Part 1. Basic Shapes and Properties (15 - 20 minutes)

Define basic geometrical shapes.

Part 2. All about Angles (45 - 60 minutes)

Learn angle definitions, how they are classified, how to measure angles using a protractor, and how to solve problems using angle measurements. Practice problems provided.

Part 3. The Pythagorean Theorem (45 - 60 minutes)

Learn how to use Pythagorean Theorem to calculate angles in triangles.

Part 4. Angles and Ship Navigation (20 - 30 minutes)

Discover how OCEARCH uses angles to navigate while on expedition.

Activity 1. Shark Measurements (30 - 45 minutes)

This activity is intended to provide students with the opportunity to use angles in real situations. Taxonomists use morphometrics (type of study used to analyze the size and shape of physical features) to classify species.

Materials: Pencils, protractors, and worksheet (provided).

Activity 2. Shark Stories (30 - 45 minutes or take-home)

This activity will allow students to use their knowledge of angles in a creative way while coming up with scientific reasons to describe shark migration patterns.

Materials: Computer with internet access, paper, pencils, protractors, and worksheet (provided).

