



## TEACHER PAGE

### Lesson: Ahoy! Complementary Angles

Teacher-Author: Connie Dolezal

ASSET Animator: Jonathon Peters

**New Arizona Math Strand 4 Geometry and Measurement**

**Grades 9-12**

**Articulated 4MH1-06** Solve problems related to complementary, supplementary, or congruent angle concepts.

**Old Arizona Math Standard 4 Geometry**

**Grades 9-12**

**4MP2-PO8** Solve problems involving complementary, supplementary and congruent angles.

#### **Learning Objectives: Students will be able to:**

- identify complementary angles
- explain the measurement of complementary angles
- apply the definition of complementary angles

#### **Overview and Content:**

This lesson defines complementary angles as not related to the word complimentary. Many examples of these angles are given along with opportunity for practice calculating measurements and selecting the correct angles. Complementary angles have a sum of 90 degrees.

#### **Engage Students:**

Give students objects from which to look for corner angles. Students measure the angles and list any that are 90 degrees. Find the number of pieces that are placed together (like a picture frame) to form the 90 degrees and determine the angles of those pieces.

#### **Follow-up:**

Treasure Hunt: Explore the classroom and school to find objects that are made up of 2 items that form 90 degree angles when put together. Search for any of the smaller angles that are other than 45 degrees. The DIG DEEPER uses the pirate theme to prove geometry "proofs." SO WHAT gives several practical applications of complementary angles, an excellent rationale and a question to answer. DIG DEEPER sets a huge challenge in find proof for a pair of complementary angles -- and you walk the plank if you can't do it. Student partners make an extraordinary Mitre Box in the TALK ABOUT IT!

#### **Assessment:**

Students must be able to calculate complementary angles and expanded complementary angles using variables.

