



TEACHER PAGE

Lesson: Angle Hypatia

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New Arizona Math Strand 4 Geometry and Measurement **Grades 6, 7**
Articulated 4M61-O7 Identify supplementary or complementary angles; **4M71-O6** Identify the angles created by two lines and a transversal.
Old Arizona Math Standard 4 Geometry Essentials 2 **Grades 6-8**
4ME2-PO3 Label corresponding, supplementary and complementary angles.

Learning Objectives: The student will be able to:
•demonstrate understanding of corresponding, supplementary and complementary angles by locating and labeling them in illustrations and pictures.
•demonstrate understanding of and name the measures of complementary and supplementary angles

Overview and Content:
Students are introduced to Hypatia, the Greek mathematician, complementary, supplementary and corresponding angles, and transversal. Students will calculate angle relationships practicing the identification tag of 180 (supplementary) and 90 degrees (complementary). Encourage students to solve the DIG DEEPER problem and either draw or use the computer to prepare the floor plan in TALK ABOUT IT! In the study of angle relationships in corresponding, supplementary and complementary angles often determine the strength of buildings as well as their aesthetic appeal. This lesson defines and cites the properties of these angles, gives relevant examples of their uses and provides many problems to solve for practice and understanding. This lesson also has English, Navajo and Spanish narrations and scripts.

Engage students:
Teacher demonstrates fitting angles together for the rationale and purpose of angle relationships. From pictures, students identify angle relationships and name them later.

Follow-up, extensions:
Research Hypatia. Use today's equivalent of the old erector set to build structures using these special angles. Students create their own problems for each other to solve with hands-on tools; the special angles must be identified. Congruent angles can be considered one of these special angles. Students determine the relationship of congruency to the three special angles of this lesson. Students locate pictures of the uses of these angles for more critical study.

Assessment:
Students will label corresponding, supplementary and complementary angles correctly. Students will correctly calculate and solve problems using these angles.

Teachers:
Take advantage of web help with teaching mathematics on (www.evtpc.org.tutor) and <http://www.mathleague.com/help/geometry/angles.htm> (definitions)
<http://www.learn.co.uk/default.asp?WCI=Unit&WCU=3929> (complementary)
<http://www.learn.co.uk/default.asp?WCI=Unit&WCU=3931> (supplementary)
<http://www.learn.co.uk/default.asp?WCI=Unit&WCU=4888> (corresponding)

