**Lesson Plan Outline Geometry in Construction**

**Title:**

Angles of Elevation & Depression

Inverse Trigonometry

**Objective(s):**

Students will define an angle of elevation & depression in problem solving settings

The students will use inverse trigonometry to find the angle of depression and elevation in their right triangle drawings

**Learning Standard(s):**

[CCSS.MATH.CONTENT.HSG.SRT.C.8](http://www.corestandards.org/Math/Content/HSG/SRT/C/8/)Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

**Activities:**

Students will create drawings based on application problems using angles of elevation and depression.  Students will solve problems using trigonometry.

Students will use strings and tape measures to find angles of depression and elevation of objects; students will determine if roofing, pipes, and various construction items are built to the proper measurement

**Materials:**

Strings, tape measures, roof truss, pipes

Angle & Elevation & Depression W.S.