**Lesson Plan Outline Geometry in Construction**

**Title:**

Pythagorean Theorem Volume

**Objective(s):**

Students will use concepts related to radicals, special right triangles, and Pythagorean Theorem to find the volumes of 3D objects

**Learning Standard(s):**

[CCSS.MATH.CONTENT.HSG.GMD.A.3](http://www.corestandards.org/Math/Content/HSG/GMD/A/3/)

Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.\*

[CCSS.MATH.CONTENT.HSG.GMD.A.1](http://www.corestandards.org/Math/Content/HSG/GMD/A/1/)

Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. *Use dissection arguments, Cavalieri's principle, and informal limit arguments*.

**Activities:**

The students will use Pythagorean Theorem and volume formulas to find volumes of composite figures in construction

Special Right Triangles Assessment

**Materials:**

Cones and Pyramids (Hershey kisses or similar shapes)

Wiring (used for dry wall design)

Pyramid & Cone Exploration

Special Right Triangles Quiz