Precision Measurement utilizing geometry

Unit of study: Measurements

Classroom: STEM

Number of students: 25

Grade level: 6-12

1. Teacher’s objectives for the class:
	1. Major Curricular Concepts: geometry, precision measurement, technology and application of knowledge, applied learning
	2. STEM applications: solve a real world problem using previous learning in a novel way
	3. Common Core or STandards

6-8 develop or modify a model-based on evidence - to of simple systems with uncertain and less predictable factors.

Use this to design their own rims. For various automobiles.

What students will know/understand and be able to do as a result of the lesson:

Students will collaborate with peers to develop a method of precision measurement by applying Pythagorean theorem to a specified task.

2. Class activity:

(include planned instructional strategy to facilitate student learning):

Teacher brings a spare tire or auto rim into the classroom.

3. Materials: using a string to discover the radius of the rim, the individual can use a string to discover the radius, then chose the first hole, after the first hole each subsequent hole is equi distant from the radii of the first. At right angles to the first hole.

(What is required to perform the activity?)

Students in groups will use a compass, pencil and paper.

After a circle is done the students will then use the compass to solve the problem. Which is to find the six holes equidistant on the wheel drawn on the paper to have a set pattern. They are supposed to use this knowledge of geometry to implement the solution.

4. Other factors:

Is there anything special that is needed to know about the student’s, room, recent events, technology, expected outcome, etc):

5. Observation notes regarding objectives and expected outcome.

Some students may require help using the compas. They will also need to be familiar with the words diameter, radius and circumference.

Other comments (regarding expected outcome’

How students will be measures

Students will develop a method

They will be able to accurately place

Objectives: students will utilize geometry to determine equidistant holes