

## **CASTNER PROJECT** (HEIGHT OF OBJECTS)

### **Driving Question:**

How can you use geometry to measure objects of extreme height?

### **Objective:**

Given a survey, you must create a analytical report from the data.

The report must feature the following:

1. Measure the angle of elevation of objects using instruments
2. Record distance from objects using measuring tape
3. Use trigonometry to solve for the height of objects

### **Resources:**

PART 1:

- Assign roles of measurer, observations, and scribe in your group

**MEASURER:**\_\_\_\_\_

**OBSERVATIONIST:**\_\_\_\_\_

**SCRIBE:**\_\_\_\_\_

- Find distance and angle of elevations from around the campus as a class within groups

PART 2:

- Perform calculations back in classroom using calculators
- Organize data into report that explains useful purposes of trigonometry in real world settings.

<u>OBJECT/LOCATION</u>	<u>DISTANCE FROM OBJECT</u>	<u>ANGLE OF ELEVATION</u>	<u>HEIGHT OF OBJECT</u>
<b>EX. Height of Classroom</b>	(USE MEASURING TAPE)	(USE PROTRACTOR) 90° - ____ ° = ____	(USE CALCULATOR) tan(____°) = ____ x Distance from obj.  **ADD HEIGHT OF PERSON**.
<b>HEIGHT OF BUILDING</b>			
<b>TREE</b>			
<b>STADIUM LIGHT</b>			
<b>BASKETBALL GOAL</b>			
<b>MOUNTAIN</b>			