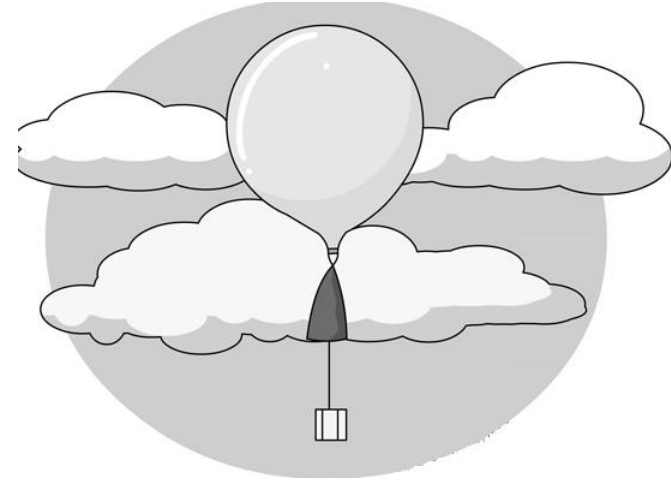


Station 4: Command Center

While listening to the tour at the Command Center, answer the following questions. **Answer in complete sentences!**

1. What weather measurements are taken by the balloon?
 - a. _____
 - b. _____
 - c. _____
 - d. _____
2. Why do you think during some blocks of time there would be **no** data sent from the balloon? What might cause this to happen?
3. What is causing the weather readings from the balloon *to change* after certain periods of time?
4. What is causing the weather readings *to remain the same* for certain periods of time?
5. If the balloon were raised again up to 2,000 feet above ground, what do you think would happen to the weather data?

Weather Balloon Field Trip April 18, 2013



Station 1: Balloon Launch

Time: _____
Balloon Height (using string): _____

Time: _____
Balloon Height (using string): _____

Time: _____
Balloon Height (using string): _____

Time: _____
Balloon Height (using string): _____

Station 2:

Measuring Balloon Height

1. Measure length of your foot using a ruler (inches). This will be your measurement step
Length of Measurement Step (inches): _____
2. Walking in a straight line, count the steps from the ground location *directly below the balloon* to the point where you will measure with the inclinometer.
3. Use the inclinometer to determine the angle of elevation.
4. Calculate the height of the balloon (in feet) using the formula.

$$\text{Height} = d \cdot \tan(\text{angle})$$

Measurement #1	Time:
Distance from object (in steps):	Distance from object (in feet):
Inclinometer Angle:	Calculate height of balloon:

Measurement #2	Time:
Distance from object (in steps):	Distance from object (in feet):
Inclinometer Angle:	Calculate height of balloon:

Measurement #3	Time:
Distance from object (in steps):	Distance from object (in feet):
Inclinometer Angle:	Calculate height of balloon:

Measurement #4	Time:
Distance from object (in steps):	Distance from object (in feet):
Inclinometer Angle:	Calculate height of balloon:

Station 3:

Determining Locations

Using the GPS Unit

Site Name	Latitude		Longitude	
	Value	Direction	Value	Direction
Current Location: _____				
2 nd Launch Site: _____				
3 rd Launch Site: _____				

Using a Compass

Type of Cloud Formation	Compass Bearing