

Sunset Observations: A Year-Long Assignment

Due Dates:

Location picked: September 2

In-progress grades: September 28, October 19, January 25, March 15

Turn in for grade: December 7; May 10

In this activity you record the time and location of the sunset each week, and create a drawing of your observations. When you make your observations, you will also record the location and phase of the moon.

First you need to pick the spot where you will make your observations. **You need to use the same spot for every sunset observation.**

- ☼ Think about your schedule in the evenings: The sun sets at 6:50 pm on August 23rd, but at 4:50 pm on December 1st!
- ☼ You do not need to record on the same day of the week, but try to be as close as possible.
- ☼ Choose a spot where you have a clear view of most of the sky and horizon to the west. Good locations might be the top of a building or in an open space, such as a field or parking lot.
- ☼ Look for convenient landmarks on the horizon. These may be far-away buildings, trees, telephone poles, hills, or other easily recognizable objects. These will help you to place the location of the sun on your picture.

After you have chosen a place to make your observations, you will need to record the topography of the horizon. You may do this by drawing, painting, or photographing it.

Friday, September 2: We will be in the computer lab to print out a satellite photo and topographic map of your location.

Make a half-scale sketch of the objects on the horizon:

- ☼ Hold out a metric ruler at arm's length. Measure the observed distance between two objects on the horizon. Draw these objects on your paper at one-half this distance.
- ☼ Create your topography either using your sketch, or with another drawing, or a painting or photograph.

Now start your observations.

- ☼ On your drawing, place an arrow showing the location of the sunset. Measure the distance with your ruler held at arm's length.
- ☼ Write the date and time of the observation at the arrow.
- ☼ If it is foggy or cloudy, and you cannot see the sunset, record the date in a table labeled "No visibility days."
- ☼ On another piece of paper, record the phase and location of the moon (approximate the location, e.g. "Near the sun," "just rising" "half way up" "over head"). If you cannot see the moon, write "not visible."