≈ Astronomy Unit 2 ≈
Outdoor Astronomy Lab

Name:_____

Period: _____ Date: _____

Materials: Small object, small ball of clay (optional), page 2 of this lab.
Set-Up: Use the clay to mount your object to your paper along one edge. If your object stands on its own, you won't need the clay.(See page 2.)

Procedure: ***This procedure could take you a couple of weeks. Plan ahead!***

1. Take your set-up outside to a location that you can access regularly at the same time of day on different sunny/partly sunny days at least five times over a period of a week or so.
2. Make careful note of the location, date, time, and sun condition for your viewings. Jot these down in the data table.
3. On the large paper, mark the top of the shadow of your object. Write the date next to your mark.
4. Over the next three weeks, go to the same location at the same time (within fifteen minutes) and repeat steps two and three.

Location:_____

Observation	Date	Time	Sunny/Partly Cloudy	Shadow Length (cm)
1				
2				
3				
4				
5				

Questions/Analysis:

1. What happened to the shadow over the course of the three weeks?

2. What does this tell you about the position of the sun over the course of the three weeks?

3. Relate your answer to question two to the climate at this time of year.[1]

[1] **Climate refers to the overall weather trend at this time of year and not the actual weather (temperature, precipitation, etc.)**

Place your object in this box. →

<u>The height of my object is: _____</u>

<u>Instructions</u>: Put the paper on the ground in such a way that the object casts a shadow toward the bottom of this piece of paper. (The shadow shouldn't be long enough to reach the bottom. Just make sure it points toward the bottom.) <u>Mark the edge of the umbra and record the date</u>. Repeat as instructed on page one. When you're done, staple this paper to the back of page one and turn it in. Be sure to record the height of the object at the top of this paper.