



Constellation Tracking

Name _____ Block _____

Track a constellation as it moves across the sky

_____ / 35 pts.

Problem: How does a constellation's altitude and azimuth change over time?

In this assignment, you will pick a constellation and measure its altitude and azimuth over time. You need at least 3 observations of your constellation which can be taken on the same evening at 30 min. intervals OR over the three evenings (at the same time each night).

Directions:

1. Pick a constellation to track.
2. Make an experimental design diagram for your problem. Quantify the hypothesis! (Convey what you think will happen to altitude and azimuth, NOT just that it will change.)
3. Make a drawing of the horizon. This should include the sky and at least 1 major landmark.
4. Neatly draw in the position and label the time, date, altitude, and azimuth for each observation. To measure altitude and azimuth, you may pick a star in the constellation as your reference point. Label this reference star on your drawing.
5. Write a short conclusion paragraph in complete sentences answering the following questions:
 - a. Did your data support your hypothesis? Why or Why not?
 - b. What did you learn? How did your constellation move across the sky.?
 - c. Any surprises? Changes or recommendation for improvement?

Scoring Guide:

Experimental Design

0	1	2	3
Not included	Incomplete	Somewhat complete	Complete & Accurate

Drawing

0	1	2	3
Messy, little detail	Poor detail	Adequate detail	Very neat, excellent detail

Observations

Time

0	1	2	3
Not included	Time on 1 sketch	Time on 2 sketches	Time on all 3 sketches

Altitude

0	1	2	3
Not included	Altitude on 1 sketch	Altitude on 2 sketches	Altitude on all 3 sketches

Azimuth

0	1	2	3
Not included	Azimuth on 1 sketch	Azimuth on 2 sketches	Azimuth on all 3 sketches

Conclusion

0	1	2	3
Didn't answer a, b, or c	Answered one question	Answered two questions	Answered all three with adequate details

Attach this sheet to sketches and data, exp. design, and conclusion.