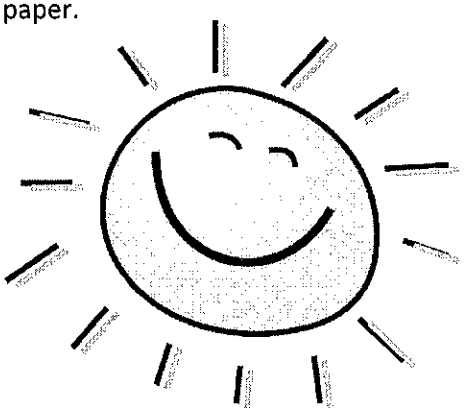
Name _____ Date _____ Period _____

Sun and Moon Observations

Directions – Use the following data tables about the motions of the sun and moon to complete the analysis questions on the back of this paper.



Sun Observations				
Date	Sunrise	Azimuth	Sunset	Azimuth
6/20/2017	6:14 AM	59°	8:57 PM	301°
6/27/2017	6:16 AM	60°	8:58 PM	300°
7/7/2017	6:21 AM	61°	8:57 PM	299°
7/14/2017	6:25 AM	62°	8:54 PM	298°
7/31/2017	6:38 AM	66°	8:42 PM	293°

Moon Observations			
Date	Time	Azimuth	Altitude
6/26/2017	7:00 PM	248°	49°
6/27/2017	6:59 PM	228°	56°
6/28/2017	7:02 PM	206°	58°
6/29/2017	7:01 PM	183°	56°
6/30/2017	7:00 PM	165°	51°
7/1/2017	6:58 PM	151°	44°
7/2/2017	7;03 PM	142°	36°
7/3/2017	7:00 PM	133°	27°
7/4/2017	7:02 PM	127°	18°
7/5/2017	7:00 PM	126°	18°
7/6/2017	6:58 PM	128°	8°
7/7/2017	7:09 PM	115°	2°

Analysis Questions

1. Looking at the sun observation data table, what pattern do you notice? Explain

2. Use the data table to plot the motion of the sun on the sky chart provided.
3. Does the sun rise at due east (exact east 90°) every morning? Explain why or why not.

4. Does the sun set in due west (exact west 270°) every evening? Explain why or why not.

5. Why do you think the sunrise and sunset are changing a little every week?

6. How do you think the change in sunrise and sunset influences temperature changes with each season?

7. Looking at the moon observation data table, what patterns do you notice? Explain them if you can.

8. Use the same sky chart to plot the motion of the moon using the moon data from the moon table.
9. What pattern do you notice with the moon's azimuth on the sky chart?

10. What pattern do you notice with the moon's altitude on the sky chart?

11. Why do you think the moon's azimuth and the altitude are changing?

12. From this moon data, what can you infer about the direction of the moon's orbit?