

NAME: _____

Date: _____

Day, Night, and the Sun

What do you observe about the length of daylight & the position of the sun in the sky during a year?

Review the data table below. It is typical data that would be collected in the United States.

2006 DAYLIGHT HOURS AND SUN ANGLE				
<u>Month**</u>	<u>Time of Sunrise (am)</u>	<u>Time of Sunset (pm)</u>	<u>Daylight (hours)</u>	<u>Sun's Highest Angle</u>
Jan.	7:19	5:19	10.0	32°
Feb.	6:50	5:54	11.1	41°
March	6:09	6:21	12.2	52°
April	5:24	6:51	13.4	64°
May	4:53	7:17	14.4	72°
June	4:46	7:34	14.8	75°
July	5:03	7:26	14.4	73°
Aug.	5:28	6:53	13.4	64°
Sept.	5:55	6:06	12.2	53°
Oct.	6:23	5:22	11.0	42°
Nov.	6:56	4:49	10.0	32°
Dec.	7:21	4:52	9.5	29°


**Data based on 21st day of each month.

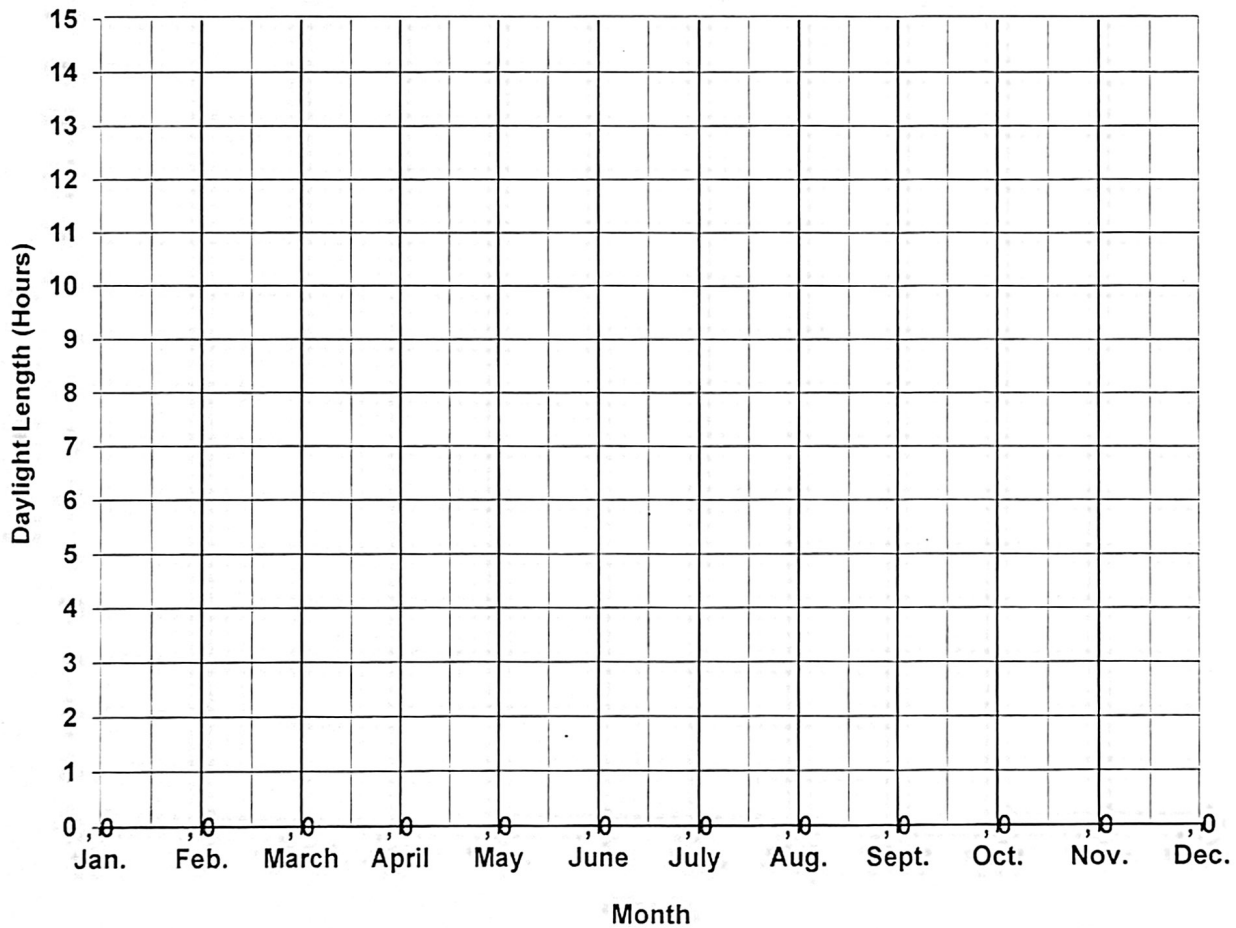
Record below the pattern you observe for each of the following (be sure to include a detailed description of your observations).

Data to observe	<u>Description of patterns you notice.</u>
Time of sunrise	
Time of sunset	
Length of daylight	
The highest angle of the Sun in the sky	


Prepare a line graph below that shows daylight length vs. the month for the 2006 year. Then, prepare a line graph below that shows sun angle vs. the month for the 2006 year. Use one color to plot the daylight length points and another color to plot the Sun's highest angle points.

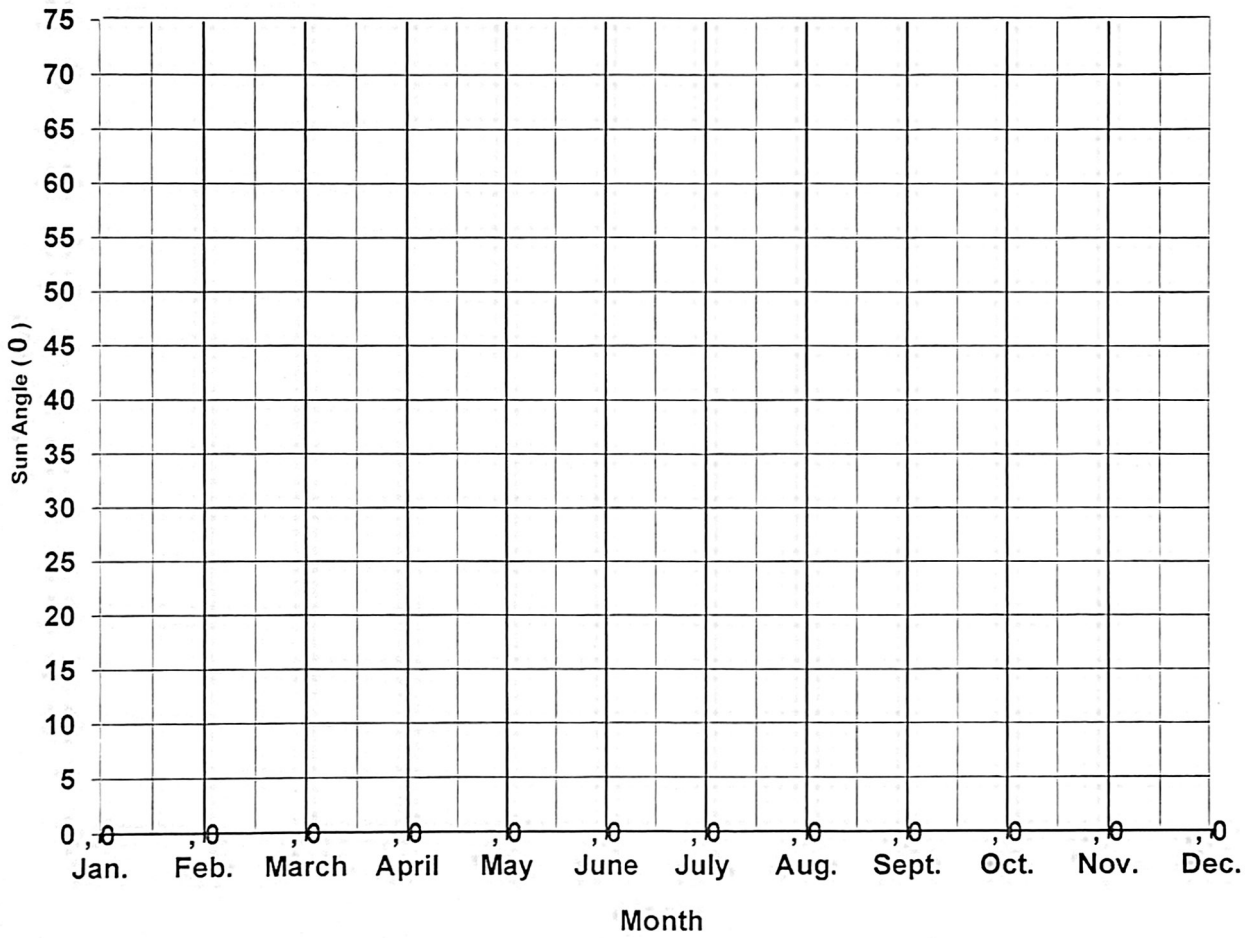
Graph of Daylight Length vs. Month (2006)

 = daylight length



Graph of Sun Angle vs. Month (2006)

 = sun angle



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What do you observe about the length of daylight & the position of the sun in the sky during a year?

Use the information that you learned from this activity to answer the questions below. Be sure to use complete sentences.

1. What is the pattern that you see now that you have graphed the data?

2. Based on your graph, what do you think was the length of daylight for each of the following days:

March 6?	
July 6?	
November 6?	

3. When are the daylight hours:

The shortest?	
The longest?	
About equal to the length of the night (12hrs.)?	

4. When is the Sun:

Lowest in the sky?	
Highest in the sky?	

5. What is the relationship between the length of daylight and the Sun's angle?

6. How do the Sun's position in the sky and the length of daylight relate to the changes throughout the year?
