Graphing the Winter Solstice

For half of each year the South Pole is tilted toward the sun causing the seasonal phenomena known as the winter solstice. Because the earth is tilted in this way the Northern Hemisphere experiences longer periods of darkness. The term 'solstice' literally means 'the sun stands still'.

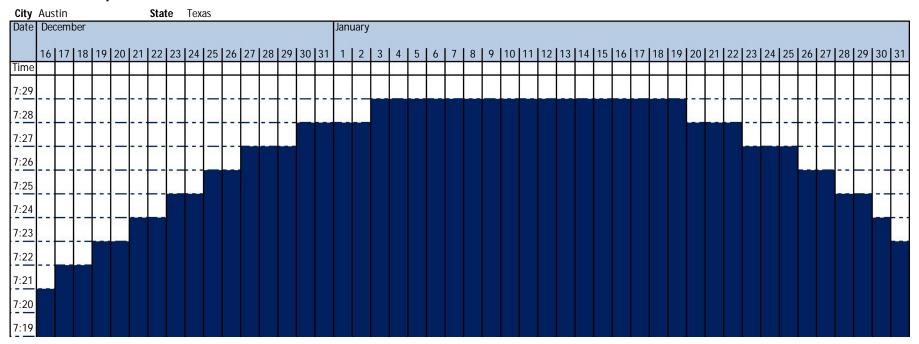
Throughout history humans have celebrated the rebirth of sunlight after the darkest period of the year - The Winter Solstice.

On the Sunrise Bar Graph below you can see that the longest period of darkness, or the longest night, in Austin, Texas will span from January 3rd until the 19th. That's a long, long time! It does seem like the sun stands still, doesn't it?

No wonder people want to celebrate the sun's return. You can see on the Sunrise Bar Graph below that the winter solstice will end in Austin, Texas on January 20th. Hurrah!

Do you wonder when the winter solstice will break where you live? Would you like to make a Sunrise Bar Graph like the one below? Just follow the instructions and use the graphing grid provided for you on page 2 and have some fun studying the winter solstice.

Sunrise Bar Graph



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Materials: ruler, pencil, colored pencil (dark shade), the internet, a printed copy of page 2

Procedure:

- * Write the name of your city and state in the spaces provided on the Sunrise Bar Graph below.
- * Access www.sunrisesunset.com. The specific link you'll need to use create a custom sunrise calendar for your town is http://www.sunrisesunset.com/custom_srss_calendar.asp
- * Create and print a sunrise calendar for the months of December and January.
- * Review the sunrise times printed on the calendars. Write those times down the graph column labeled Time.
- * Record the daily sunrise times on the graph below.

Observation:

- * What is the time span of your longest night? When is your winter solstice?
- * What day marks the end of your winter solstice?

Sunrise Bar Graph

City State Date December January 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 3 5 7 8 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 2 Time