

On The Way To Summer Solstice

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Always an early riser, I particularly like mornings between vernal equinox and summer solstice (northern hemisphere), this year on June 20. From late May through June, the Sun is rising by the time I reach my office on the east end of our house around 5:20 a.m. daylight saving time. I have a mirror positioned so I can see it from my desk.



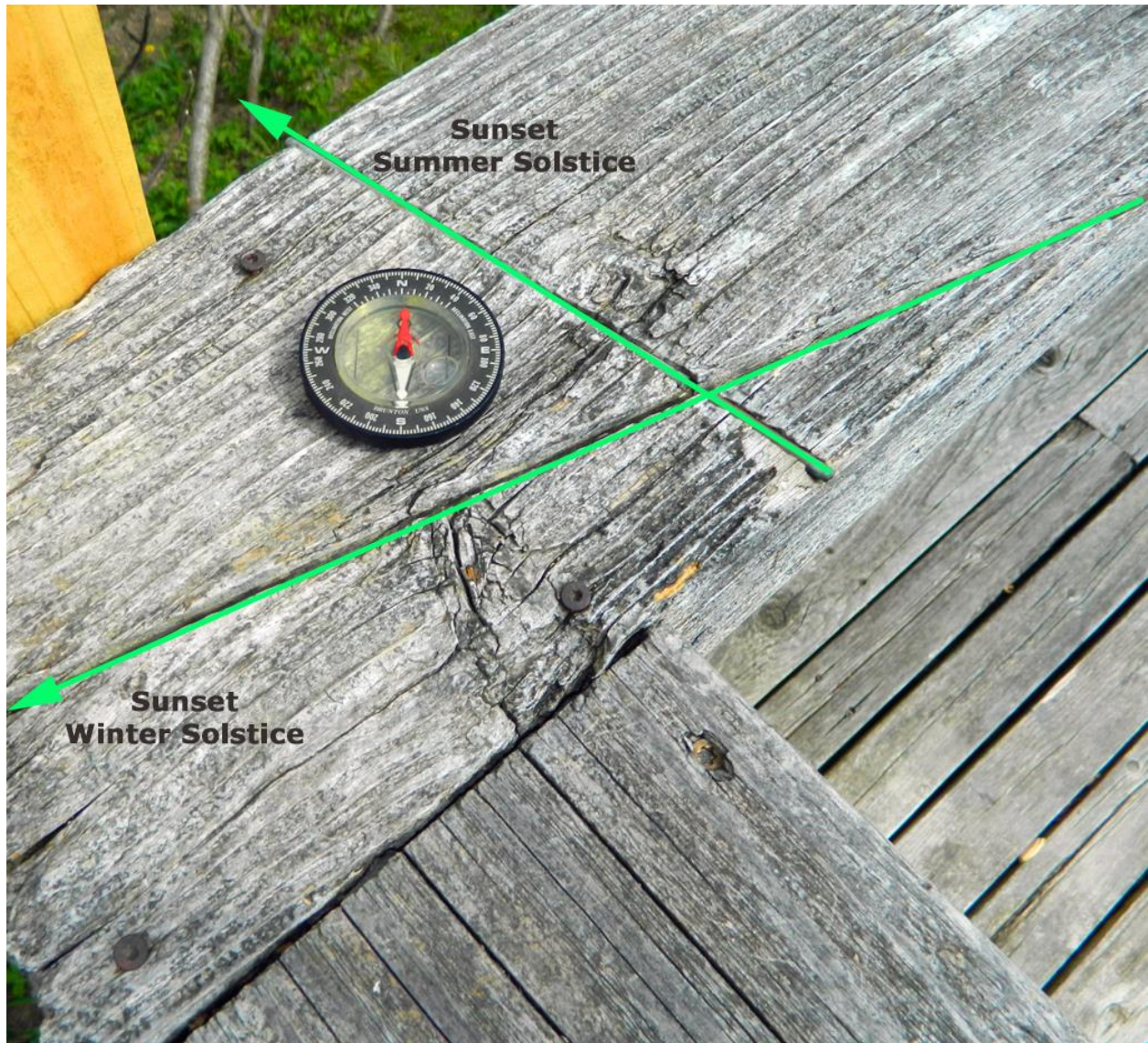
Each day on the way to summer solstice, the Sun is above the horizon longer as the arc of its path appears to move northward, and it takes longer to reach the western horizon and descend out of sight.

Skies darken and nighttime objects appear later and later. First visible is the Moon, then Venus, Jupiter or Mars, and Mercury depending on where they are in their orbits relative to Earth. Vega,¹ which equals Saturn in brightness, appears next followed by other stars.

About 20 years ago I read an article that recommended finding a convenient surface where lines pointing to the Sun's setting positions on the winter and

¹ [https://en.wikipedia.org/wiki/Magnitude_\(astronomy\)](https://en.wikipedia.org/wiki/Magnitude_(astronomy))

summer solstices could be drawn. Great idea! I did this on our deck railing and the result helped me visualize the much longer path horizon to horizon the Sun travels on summer solstice versus winter solstice. Where I live, it is above the horizon three hours and 17 minutes longer on summer solstice than winter solstice.² Earth's axial tilt, rotation, and movement around the Sun cause these differences.



The Web makes discovering more about solstices and equinoxes easy, and I hope you'll take the time. Not much is conveyed K through 12 (I didn't learn about them until adulthood) which is regrettable. Maybe it's due to the alignment of winter solstice with Christmas...and vernal equinox, Easter.

Students might note these associations and ask questions...

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² <https://www.timeanddate.com/sun/usa/sunrise?month=6>