

The Summer and Winter Solstices

You know them as the first days of winter and summer. Others refer to them as the shortest and longest days of the year. So, what makes these days — the *solstices* — special? To understand, you'll need a little background about the Sun and the Earth.

In the summer, days feel longer because the Sun rises earlier in the morning and sets later at night. When the North Pole of the Earth is tilted toward the Sun, we in the northern hemisphere receive more sunlight and it's summer. As the Earth moves in its orbit, the tilt of the North Pole changes (see diagram). When it is tilted away from the Sun, it is winter in the northern hemisphere. In between we have autumn and spring.

The day that the Earth's North Pole is tilted closest to the sun is called the summer solstice. This is the longest day (most daylight hours) of the year for people living in the northern hemisphere. It is also the day that the Sun reaches its highest point in the sky.

The winter solstice, or the shortest day of the year, happens when the Earth's North Pole is tilted farthest from the Sun. In between, there are two times when the tilt of the Earth is zero, meaning that the tilt is neither away from the Sun nor toward the Sun. These are the vernal equinox — the first day of spring — and the autumnal equinox — the first day of fall. *Equinox* means "equal." During these times, the hours of daylight and night are equal. Both are 12 hours long. Check out the chart below to see how the solstice works.

