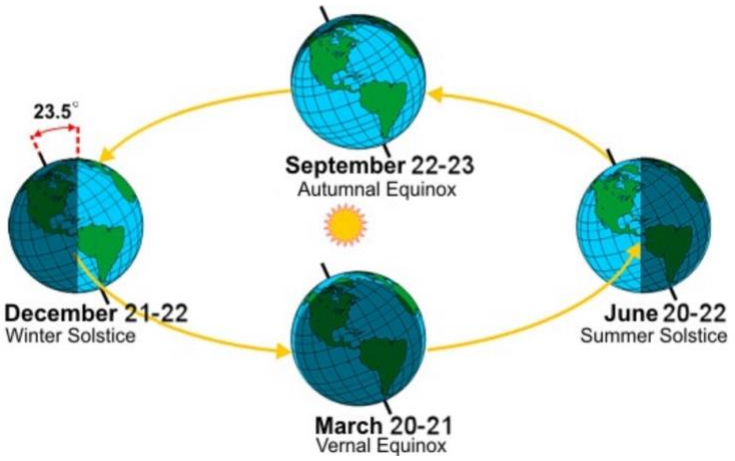
# Seasons

The four seasons of the Earth – **spring, summer, autumn** and **winter** -- are caused by the 23.5º tilt of the Earth's axis as it orbits the Sun.




*Graphic Credit: National Weather Service, www.weather.gov*

In the **Northern Hemisphere**:

In June, when the Earth is tilted towards Sun and the Sun reaches its highest point in the sky, that is called the **summer solstice** and is the longest day of the year.

In September, when the Sun crosses the celestial equator and is halfway between the solstices, that is called the **fall** or **autumnal equinox** and nighttime and daytime are of the same length.

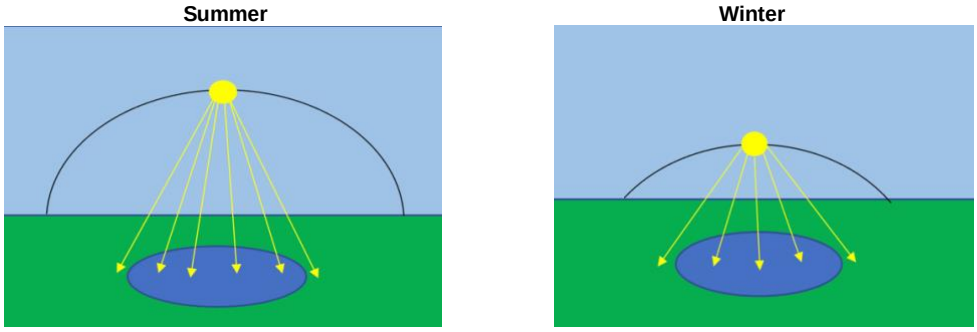
In December, when the Earth is tilted the furthest away from the Sun and the Sun reaches its lowest point in the sky, that is called the **winter solstice** and is the shortest day of the year.

In March, when the Sun again crosses the celestial equator and is halfway between the solstices, that is called the **spring** or **vernal equinox** and nighttime and daytime are of the same length.

In the **Southern Hemisphere**, these seasons are reversed.

**Why is it warmer in the summer than the winter?**

Because the angle of the Sun is higher in the summer than in the winter, and days are longer, more photons from the Sun are hitting the Earth, thus warming it.




Note: The distance between the Sun and the Earth varies throughout the year. This has **no** effect upon the warming or cooling of the Earth and its atmosphere.