Name: _____ Date: _____

Seasons

Science Literacy Article

There are four **seasons**: winter, spring, summer, and autumn. Seasons occur because of two reasons:
Earth revolves around the Sun once every 365 days, and
Earth is tilted on its axis (an imaginary line that runs through both poles) at an angle of 23.5 degrees.
This revolution and tilt allows the Earth to experience weather patterns and different amounts of daylight hours at different places on Earth.

The **equator** is a horizontal (*side to side*) imaginary line that divides the Earth into two equal halves, or **hemispheres**. The northern hemisphere is located above the equator and the southern hemisphere is located below the equator. Since the Earth is tilted on its axis, the northern and southern hemispheres always experience opposite seasons. For example, if the northern hemisphere is experiencing summer, then the southern hemisphere is experiencing winter.

Winter is the coldest season of the year. This is because the hemisphere experiencing winter is tilted away from the Sun and receives less direct sunlight. During winter, there are shorter days and longer nights. The **winter solstice** is the shortest day of the year with the least amount of sunlight.

During spring, the weather becomes warmer. The tilt of the Earth is not toward *or* away from the Sun. Therefore, these areas will observe nearly equal amounts of day and night. The **vernal equinox** occurs in the spring and is when there is exactly 12 hours of day and 12 hours of night.

Summer is the warmest season of the year. This is because the hemisphere experiencing summer is tilted toward the Sun and receives more direct sunlight. During summer, there are longer days and shorter nights. The **summer solstice** is the longest day of the year with the most amount of sunlight.

During autumn, the weather becomes cooler. Again, the tilt of the Earth is not toward *or* away from the Sun. Therefore, these areas will observe nearly equal amounts of day and night, just like in the spring. The **autumnal equinox** occurs in autumn and is when there is exactly 12 hours of day and 12 hours of night.

To recap, here are the main ideas concerning **seasons**:

Seasons occur because of the revolution and tilt of the Earth.
Winter has the *shortest days and longest nights*.
Spring and fall have a *balanced* amount of day and night.
Summer has the *longest days and shortest nights*.
The **winter solstice** is the shortest day of the year.
The **summer solstice** is the longest day of the year.
The **vernal equinox** is in the spring and is equal amounts of day and night.
The **autumnal equinox** is in autumn and is also equal amounts of day and night.

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