

Calendars And How To Appreciate Them

The calendar is such a routine, ordinary thing, but how much do you really know about the operation of it. Why is it like that? A DAY: The Earth turns at a reasonably steady speed about the imaginary line running between the North and South Poles called the Earth's Axis. The time it takes to spin once is called a 'rotation' and this takes just under twenty-four hours. However, because the Earth is continuously traveling around the Sun, the exact time from noon one day to noon the next is 3 minutes 56 seconds longer and this makes a day almost exactly twenty-four hours in length. The actual time from noon to noon varies depending where the Earth is on its celestial path around the Sun, but if you average the days in a year out, it comes to exactly twenty-four hours. A YEAR: All nine planets in our solar system move around the Sun in approximately perfectly circular routes called orbits. Each trip around the Sun is called a revolution and all the planets revolve around the Sun in the same direction. The course the Earth takes can be verified by noting its location against the background stars. Since you cannot see the Sun and the stars at the same time, it is obligatory to note the location of the Sun in the morning and the see which stars appear there in the night. You will see that the Sun appears to pass through the twelve constellations of the zodiac during a year. Earth's journey around the Sun, which seems like the Sun travelling through the zodiac takes about 365.25 days. This is different from year to year, so astronomers add or delete a second in some years to keep their time accurate with the Earth's motion. THE SEASONS: The seasons indicate the variation in the pattern of daylight over the course of a year. Because the Earth is tilted off centre, different parts of it get different amounts of sunlight on different stages of its path around the Sun, a path that we call a year. So, between about the 21st September and late March, the Earth's Northern Hemisphere is tilted away from the Sun, which creates Autumn and Winter, giving less than twelve hours of daylight per day. From April to the 20th September, the Northern Hemisphere receives more than twelve hours of daylight a day, producing Spring and Summer. The exact opposite occurs in the Southern Hemisphere. The Equinoxes occur at the points in the year when there is exactly twelve hours of sunlight and darkness in the day. So, the vernal or Spring equinox is on or around the 21st March and the autumnal equinox is on or around the 21st September. Summer officially begins on the day with the greatest amount of daylight, the 21st June or summer solstice. The winter solstice occurs on the shortest day, the 21st December. 'Solstice' is a combination of two words meaning 'sun standing still' and the days are so called because they are the days when the ostensible movement of the Sun reaches its extremes and reverses course again. Do you like to read about [astronomy](#), why not pop along to our website at: <http://astronomy.the-real-way.com>