

1: The Seasons and the Earth's Orbit

Salisbury, Wiltshire: Michael Russell, Book. Illus. by Stone, Reynolds. Fine. Hardcover. Signed by Author(s). Limited Edition. Limited Edition / , SIGNED.

Understanding Astronomy The Sun and the Seasons To those of us who live on earth, the most important astronomical object by far is the sun. It provides light and warmth. This photo was made on June 21, when the sun set considerably north of due west. On any given day, the sun moves through our sky in the same way as a star. It rises somewhere along the eastern horizon and sets somewhere in the west. If you live at a mid-northern latitude most of North America, Europe, Asia, and northern Africa, you always see the noon sun somewhere in the southern sky. For one thing, the sun takes a full 24 hours to make a complete circle around the celestial sphere, instead of just 23 hours, 56 minutes. For obvious reasons, we define our day based on the motion of the sun, not the stars. This simulated multiple-exposure image shows the path of the rising sun through the eastern sky on the morning of the 21st of each month, from December at the right through June at the left. The spreading of the trails as they go upward is a distortion caused by stretching the domed sky onto a flat semicircle. The sun appears to move along with the celestial sphere on any given day, but follows different circles at different times of the year: It then rises directly east and sets directly west. The exact dates of the equinoxes vary from year to year, but are always near March 20 and September 22. By the June solstice usually June 21, the sun rises considerably north of due east and sets considerably north of due west. For mid-northern observers, the noon sun is still toward the south, but much higher in the sky than at the equinoxes. By the September equinox, its path is again along the celestial equator. The southward drift then continues until the December solstice usually December 21, when the sun rises considerably south of due east and sets considerably south of due west. For mid-northern observers, the noon sun is quite low in the southern sky. But notice that in June, considerably more than half of the circle is above the horizon, while in December, much less than half the circle is visible. This is why, if you live in the north, you have more hours of daylight in June during your summer than in December during your winter. The Seasons The added hours of daylight are one reason why summer is warmer than winter. Notice from the illustrations above that the noon sun is much higher in June than in December. In December, on the other hand, the same amount of energy is diluted over a larger area of ground: When the sun is at a lower angle, the same amount of energy is spread over a larger area of ground, so the ground is heated less. There is a common misconception that summer is warmer than winter because the sun is closer to us in the summer. Just look at the constellations in the east a little before sunrise, or the constellations in the west a little after sunset, and allow for the angle of the sun below your horizon. The ecliptic is a great circle on the celestial sphere, tipped. Its orientation with respect to our horizon changes as the sphere spins around us each day. It has the orientation shown here at noon in December and at midnight in June. So the ecliptic is an imaginary circle around the celestial sphere, centered on us, that marks all the possible locations of the sun with respect to the constellations. Each day, as the sun takes four minutes longer than the constellations to spin around us, it creeps approximately one degree eastward along the ecliptic. It completes the circle in exactly one full year. But the ecliptic is tipped at a 23.5 degree angle. The constellations of the zodiac are simply those that happen to lie along the ecliptic. Traditionally there are 12 of them: According to the modern official constellation boundaries, however, most of the Scorpius portion of the ecliptic actually lies in the adjacent constellation Ophiuchus. In this degree map of the entire celestial sphere, the north celestial pole is stretched across the top edge and the south celestial pole across the bottom edge. The celestial equator is marked in blue, and the 12 constellations of the zodiac are outlined. At the March equinox the sun is at the far right, in Pisces. The sun drifts leftward by about one degree per day, moving first into the northern half of the sky and then, after the September equinox, into the southern half. Again, we partially compensate for this by setting our clocks to different time zones. So at the equinoxes, for example, the sun still follows the celestial equator, while at the solstices, the sun follows a circle that lies 23.5 degrees north or south of the equator. If you can visualize the paths of stars on these parts of the celestial sphere, then you can visualize the daily path of the sun. North of the Arctic Circle there will be days around the December solstice when the sun never rises. Still farther north there will

be more and more days of darkness in winter and continuous sunlight in summer. At the North Pole, the sun is above the horizon for six straight months March through September, spinning around in horizontal circles, reaching a maximum height of 90° . As you travel southward in the northern hemisphere, the noon sun gets higher and higher. The first qualitative change occurs at 23.5° . This latitude is called the Tropic of Cancer. Farther south, in the so-called tropics, the noon sun will appear in the northern sky for a period of time around the June solstice. At the equator, the noon sun is straight overhead on the equinoxes. And after you pass 23.5° Much farther south is the Antarctic Circle, where the sun never quite rises on the June solstice and never quite sets on the December solstice. Researchers at the South Pole have continuous daylight from September through March, and continuous night including twilight from March through September. The Tropics of Cancer and Capricorn mark the locations where the rays of the noon sun are perpendicular to the ground at the solstices. And the tropics are almost always warm—even though they never get much more than 12 hours of sunlight in a day—because the mid-day sun is always so high in the sky. The intermediate latitudes, which generally have hot summers and cool or cold winters, are called the temperate zones. The north temperate zone lies between the Tropic of Cancer and the Arctic Circle, while the south temperate zone where the seasons are reversed lies between the Tropic of Capricorn and the Antarctic Circle. If you live on the Arctic Circle, what is the maximum angle of the sun above your horizon in degrees? The results might surprise you. The problem is that the sun is so bright, looking directly at it can damage your eyes. Still, if you wait until the sun is greatly dimmed by clouds or haze, you can get away with a very quick glance. Because the sun is so bright, most people are surprised to learn that its angular width is only half a degree. A full circle is 360 degrees, so it would take about 720 suns, lined up side-to-side, to surround you in a full circle. A common optical illusion, however, makes the sun appear larger when it is close to our horizon. When the sun is high in the sky, on the other hand, we normally compare its size to that of the entire sky. Most of the air in our atmosphere is confined to a very thin shell, only a few miles thick. When the sun is high in the sky, its light therefore travels through only a few miles of air before reaching our eyes. When the sun is on the horizon, however, we see its light filtered through tens of miles of air. The air tends to scatter the bluer colors, making the sky appear blue. The redder colors, on the other hand, are scattered much less and therefore can penetrate much farther through the atmosphere—making sunsets appear yellow-orange. Sunlight is a mixture of all the colors of the rainbow. Air tends to scatter the bluer colors, making the sky appear blue. The redder colors can penetrate through many miles of air, causing sunsets to appear red.

2: Turning Stone Resort Casino

One of the fundamental facts of life at Earth's midlatitudes, where most of this book's readers live, is that there are significant variations in the heat we receive from the Sun during the course of the year.

Regardless of the time of day. In addition to the density of incident light, the dissipation of light in the atmosphere is greater when it falls at a shallow angle. Four temperate and subpolar seasons Winter, Spring [2] Regardless of the time of year, the northern and southern hemispheres always experience opposite seasons. This is because during summer or winter, one part of the planet is more directly exposed to the rays of the Sun see Fig. For approximately half of the year from around March 20 to around September 22, the Northern Hemisphere tips toward the Sun, with the maximum amount occurring on about June. For the other half of the year, the same happens, but in the Southern Hemisphere instead of the Northern, with the maximum around December. The two instants when the Sun is directly overhead at the Equator are the equinoxes. Also at that moment, both the North Pole and the South Pole of the Earth are just on the terminator, and hence day and night are equally divided between the two hemispheres. Around the March equinox, the Northern Hemisphere will be experiencing spring as the hours of daylight increase, and the Southern Hemisphere is experiencing autumn as daylight hours shorten. Between this effect and the shorter daylight hours, the axial tilt of the Earth accounts for most of the seasonal variation in climate in both hemispheres. Illumination of Earth by Sun at the northern solstice. Illumination of Earth by Sun at the southern solstice. Elliptical Earth orbit[edit] Compared to axial tilt, other factors contribute little to seasonal temperature changes. Orbital eccentricity can influence temperatures, but on Earth, this effect is small and is more than counteracted by other factors; research shows that the Earth as a whole is actually slightly warmer when farther from the sun. This is because the Northern Hemisphere has more land than the Southern, and land warms more readily than sea. In the temperate and polar regions, seasons are marked by changes in the amount of sunlight, which in turn often causes cycles of dormancy in plants and hibernation in animals. These effects vary with latitude and with proximity to bodies of water. For example, the South Pole is in the middle of the continent of Antarctica and therefore a considerable distance from the moderating influence of the southern oceans. The North Pole is in the Arctic Ocean, and thus its temperature extremes are buffered by the water. The result is that the South Pole is consistently colder during the southern winter than the North Pole during the northern winter. The seasonal cycle in the polar and temperate zones of one hemisphere is opposite to that of the other. When it is summer in the Northern Hemisphere, it is winter in the Southern, and vice versa. Tropics[edit] The tropical and subtropical regions see little annual fluctuation of sunlight. As a result, the amount of precipitation tends to vary more dramatically than the average temperature. When the Zone is north of the Equator, the northern tropics experience their wet season while the southern tropics have their dry season. This pattern reverses when the Zone migrates to a position south of the Equator. Mid-latitude thermal lag[edit] In meteorological terms, the solstices the maximum and minimum insolation do not fall in the middles of summer and winter. The heights of these seasons occur up to 7 weeks later because of seasonal lag. Seasons, though, are not always defined in meteorological terms. In astronomical reckoning by hours of daylight alone, the solstices and equinoxes are in the middle of the respective seasons. Because of seasonal lag due to thermal absorption and release by the oceans, regions with a continental climate, which predominate in the Northern Hemisphere, often consider these four dates to be the start of the seasons as in the diagram, with the cross-quarter days considered seasonal midpoints. Accordingly, if floral activity is regularly observed during the coolest quarter of the year in a particular area, it is still considered winter despite the traditional association of flowers with spring and summer. Additionally, the seasons are considered to change on the same dates everywhere that uses a particular calendar method regardless of variations in climate from one area to another. Most calendar-based methods use a four-season model to identify the warmest and coldest seasons, which are separated by two intermediate seasons. Meteorological[edit] Animation of seasonal differences especially snow cover through the year Meteorological seasons are reckoned by temperature, with summer being the hottest quarter of the year and winter the coldest quarter of the year. In the Societas Meteorologica Palatina which became defunct

TURNING OF THE YEARS. THE SEASONS COURSE pdf

in , an early international organization for meteorology, defined seasons as groupings of three whole months as identified by the Gregorian calendar. Ever since, professional meteorologists all over the world have used this definition. For the southern hemisphere temperate zone, spring begins on 1 September, summer on 1 December, autumn on 1 March, and winter on 1 June.

3: Understanding Astronomy: Motion of the Stars

Seasons are periods in a year marked by specific weather conditions, temperatures and length of day. Most modern day calendars divide the year in 4 seasons: spring, summer, fall (autumn) and winter.

All the leaves from the trees and plants change into multi-colored works of art before falling away. It creates bare, and vulnerable branches that reveal the true scenery underneath. It also helps represents a beautiful cycle of loss, regeneration and regrowth in tandem with the spring season when it comes around. The dead leaves and branches on the ground disintegrate and become part of the soil, acting as seeds and fertilizer later once the cold welcomes the warmer weather. The spring season is very green, the summer is very hot, the winter very cold and the fall is full of magnificent colors. The maple trees are especially vibrant with colors of red, golden yellow and combinations of both. This season is perfect for taking beautiful scenic photos and spending time outdoors. Nothing can relax and rejuvenate you more than enjoying nature and its surrounding scenery. Source The Weather Is Perfect Autumn is the "cooling off" month right between the blazing summer and chilling winter. When the cooler temperatures of fall start rolling in, saying goodbye to summer is not hard to do. Autumn is a great time to break out the jackets, coats, boots, scarves and hats in preparation for the change in season. This season creates a sense of comfort, warmth and reflection. This is a season to be thankful, and to be surrounded by the people you love. Another reason I love the holidays is for the food. What season do you love the best and why? Seasonal Shopping When fall rolls around you can expect to see your favorite stores load up on stock with themes related to this time of year. Everything from pumpkin-flavored pies and Starbucks drinks to apple ciders and new fragrances and clothes. Fall Shopping Essentials Flannel Shirts. Although they exhibit year round versatility, flannels are a fall staple. Cold weather means, dry ashy skin. Counter the element with yummy, seasonal scents. Items on Discount in the Fall Whether stores are attempting to clear inventory for new models or get rid of items that were essential during summer, fall provides an opportunity to save big on the following purchases:

4: EARTH'S Seasons - Zoom Astronomy

In the southern part of the United States, all the seasons are very apparent. The spring season is very green, the summer is very hot, the winter very cold and the fall is full of magnificent colors.

Strauss and Howe base the turning start and end dates not on the generational birth year span, but when the prior generation is entering adulthood. A generation "coming of age" is signaled by a "triggering event" that marks the turning point and the ending of one turning and the beginning of the new. For example, the "triggering event" that marked the coming of age for the Baby Boom Generation was the Assassination of John F. This marked the end of a first turning and the beginning of a second turning. This also explains why a generation is described to have "entered childhood" during a particular turning, rather than "born during" a particular turning. According to Strauss and Howe their generational types have appeared in Anglo-American history in a fixed order for more than years with one hitch, occurring in the Civil War Saeculum. They say the reason for this is because according to the chart, the Civil War came about ten years too early; the adult generations allowed the worst aspects of their generational personalities to come through; and the Progressives grew up scarred rather than ennobled. Tales for an Accelerated Culture was, but later adopted "Generation X" when it became the more widely accepted term for the cohort. Although there is as yet no universally accepted name for this generation, "Millennials" a name Strauss and Howe coined has become the most widely accepted. New Silent Generation was a proposed holding name used by Howe and Strauss in their demographic history of America, Generations, to describe the generation whose birth years began somewhere in the mids and the ending point will be around the mids. Howe now refers to this generation most likely currently being born as the Homeland Generation. The absence of any attempt to constrict consumer spending through taxes or rationing and the tax cuts of the time suggest that any Crisis Era may have begun, if at all, later, as after Hurricane Katrina or the Financial Meltdown of The basic length of both generations and turningsâ€”about twenty yearsâ€”derives from longstanding socially and biologically determined phases of life. As long as the transition to adulthood occurs around age 20, the transition to midlife around age 40, and the transition to old age around age 60, they say the basic length of both generations and turnings will remain the same. The generational rhythm is not like certain simple, inorganic cycles in physics or astronomy, where time and periodicity can be predicted to the second. Instead, it resembles the complex, organic cycles of biology, where basic intervals endure but precise timing is difficult to predict. Strauss and Howe compare the saecular rhythm to the four seasons, which they say similarly occur in the same order, but with slightly varying timing. Just as winter may come sooner or later, and be more or less severe in any given year, the same is true of a Fourth Turning in any given saeculum. The generational cycle cannot explain the role or timing of these individual threats. What the generational cycle can do, according to Strauss and Howe, is explain how society is likely to respond to these events in different eras. It is the response, not the initial event, which defines an era according to the theory. According to Strauss and Howe, the crisis period lasts for approximately 20 years. He even sent a copy to each member of Congress. However, it has also been criticized by several historians and some political scientists and journalists, as being overly-deterministic, non-falsifiable, and unsupported by rigorous evidence. He said that their theory could be seen as pop-sociology and that it would "come in for a lot more criticism as history. The Times Literary Supplement called it "fascinating," but also, "about as vague and plausible as astrological predictions. Abort, Retry, Ignore, Fail?. That agenda becomes clear in part of their wish list for how the 13th generation may influence the future: They will clean up entertainment, de-diversify the culture, reinvent core symbols of national unity, reaffirm rituals of family and neighborhood bonding, and re-erect barriers to cushion communities from unwanted upheaval. While its agenda is the 13th generation, it can also be seen as an incredibly well-written and exhaustive history of America from to examining the era through everything except the traditional historical subjects war, politics, famine, etc. But it is a very good bad book. And if you get away from the generational mumbo jumbo, it illuminates changes that really do seem to be taking place. A , Chronicle of Higher Education report commented Howe and Strauss based these core traits on a "hodgepodge of anecdotes,

statistics, and pop-culture references" and on surveys of approximately high-school seniors from Fairfax County, Virginia , an affluent county with median household income approximately twice the national average. The report described Millennials Rising as a "good-news revolution" making "sweeping predictions" and as describing Millennials as "rule followers who were engaged, optimistic, and downright pleasant", commenting the book gave educators and "tens of millions of parents, a warm feeling. However, he believed it was also "an elaborate historical horoscope that will never withstand scholarly scrutiny. The authors lump together everyone born from through the end of Baby Boomers , a group whose two extremes have little in common. And the predictions are facile and reckless. Levine, a former president of the Teachers College of Columbia University said "Generational images are stereotypes. There are some differences that stand out, but there are more similarities between students of the past and the present. But if you wrote a book saying that, how interesting would it be? But as you look at generations as social units, we consider it to be at least as powerful and, in our view, far more powerful than other social groupings such as economic class, race, sex, religion and political parties. Among professional historians, it faces a tougher sell. Period specialists will resist the idea that their period is akin to several others. Their generational quartet is "just too wooden" and "just too neat," says one Yale historian. Riesman found in the work an "impressive grasp of a great many theoretical and historical bits and pieces" and Neustadt said Strauss and Howe "are asking damned important questions, and I honor them. One of the things to understand is that most historians never look at history in terms of generations. People are looking for a new way to connect themselves to the larger story of America. That is the problem. These are people who have noticed the power in not just generations, but the shifts that have happened over time in the way Americans have treated children and older people and have tried to link that to the broader currents of history. New working conditions as a product on the market have a classic product life-cycle and when they become widespread standard expectations of employees change accordingly. The label tends not to appear in renderings of teenagers who happen to be minorities, or poor, or who have never won a spelling bee. Nor does the term often refer to students from big cities and small towns that are nothing like Fairfax County, Va. Or who lack technological know-how. Or who struggle to complete high school. Or who never even consider college. Or who commit crimes. Or who suffer from too little parental support. Or who drop out of college.

5: Season - Wikipedia

In this episode of Crash Course Kids, Sabrina talks about how the Earth's tilt is responsible for Winter, Spring, Summer, and Fall. This first series is based on 5th grade science. We're super.

Understanding Astronomy Motion of the Stars We begin with the stars. But imagine how they must have captivated our ancestors, who spent far more time under the starry night sky! For thousands of years, people have wondered about the stars. How far away are they? What is the meaning of their arrangement in the sky? How do their locations in the sky change over time, and why? Stars rising in the east, as viewed from Ogden, Utah. The foreground mountains were illuminated by city lights. As time passes, the stars rise in the east just like the sun. But notice that they rise diagonally, not straight up. The diagonal goes from north left to south right. After a few hours, these same stars will appear high in the southern sky. Turning to face south, we see that the stars there are moving from left east to right west: Ten-minute time exposure facing south and slightly west, from the same location as the previous photo. The stars are moving from left east to right west across the field of view. Despite the annoying light pollution, you can barely make out part of the Milky Way, right of center. By now you can probably guess that stars set in the western sky, again along a diagonal: Ten-minute time exposure facing west, from the same location as the previous two photos. The stars are setting along a diagonal, from south left to north right. The bright star at the lower-right is Arcturus. And in the north, the motion is most interesting. Half-hour time exposure facing north and slightly west, from the same location as the previous three photos. The stars are tracing counter-clockwise circles, centered on a point near the prominent North Star Polaris. Notice the Big Dipper at the lower-left. The majestic motions of the night sky were intimately familiar to ancient people. It helps to stand under the night sky and point with your hands, tracing out the paths of different stars. Some stars rise directly east, heading to the right, then cross the high southern sky, and eventually set directly west. Other stars rise in the southeast and follow shorter, lower arcs across the south before setting in the southwest. A variety of other useful resources are listed at the bottom of this page. Constellations Orion the Hunter is one of the brightest and most familiar constellations of the night sky. Notice also that as the stars move through the sky, they stay in the same patterns. The permanence of the stellar patterns encourages us to mentally connect the dots to make pictures, called constellations. To better communicate, however, professional astronomers have agreed on a set of 88 official constellations, many of which originated with the ancient Greeks. Some of the official constellations are easy to recognize, while others are obscure and difficult. Learning the constellations is helpful if you want to navigate or tell time by the stars, or determine where to look in the sky for a particular star or other interesting object. If you want to learn the constellations, you can start with the Sky Motion Applet and then move on to some of the resources listed at the bottom of this page. The angle between two points in the sky is defined as the angle between two imaginary lines running from you out to those points. For the two stars shown, the angle is about 16 degrees. The bigger the angle, the farther apart the two points appear to be in the sky. To measure the angles between stars and other points in the sky, astronomers use protractors and similar instruments, often attached to a telescope for accurate pointing. To get an approximate measurement, however, you can use instruments that are always with you: To estimate larger angles you can use both hands to count multiple fists. Angle estimates using fist and fingers, with arm outstretched. How many fists, stacked one on top of another, would it take to reach from the horizon to zenith? Now use your actual fists to check this! No, remember that a right angle is 90 degrees. The Rate of Rotation Now look back at the east- and west-facing star trail photos at the top of this page. The stars in these photos are following circular arcs that begin in the east, pass high across the southern sky, and end in the west. You, the observer, are at the approximate center of these circular arcs, so you can directly measure the angle through which these stars move, by holding up your hands to the real sky, not the photo! The rate of motion is steady, so simple multiplication or division allows us to calculate the angle for any other time period: How many minutes would it take for a star to move just one degree? In the northern sky, however, you can measure the angles directly by laying a protractor down on a photograph. In the northern sky, all stars move at the same rate around the common center of their circles. How would you use

the data from the preceding photo to calculate the time required for a one-degree rotation? Multiply 19 by 15. Divide 19 by 15. No, remember which is the angle and which is the time. Divide 75 by 15. And round the answer to the nearest minute. This computer-simulated multiple-exposure image made with Sky Motion Applet shows Orion in the southern sky at the same time on seven successive nights. Each night, after completing a full circle, the stars have shifted rightward by about one degree. To be precise, though, I need to tell you that all of the angles quoted above are only approximate. In fact, it takes just 23 hours and 56 minutes, or four minutes less than a full day. So, as the seasons pass, we see different groups of stars in a given direction, at any given time of night. In January you can watch Orion rising in the east just after sunset, but by March, Orion will be high in the south, heading westward, by the time the sky is dark. Meanwhile the bright star Arcturus will be rising in the east, a sign that spring is coming. If you learn to identify the prominent stars and constellations, they will give you a strong sense of the passage of the seasons. Night owls and early risers can also enjoy a preview of the stars that evening observers will see in the coming months. The Celestial Sphere To simplify their understanding of the motions of the sky, ancient people invented a mechanical model to explain these motions. The stars appear to be attached to a giant celestial sphere, spinning about the celestial poles, and around us, once every 23 hours and 56 minutes. The model is simply that the stars are all attached to the inside of a giant rigid celestial sphere that surrounds the earth and spins around us once every 23 hours, 56 minutes. The spinning carries each star around in its observed circular path, while a special point in the northern sky, at the center of the circles, remains fixed. To better describe locations in the sky, we give names to the various parts of the celestial sphere. The fixed point in the northern sky is called the north celestial pole, and is located only about a degree away from the famous North Star which makes tiny circles around it. Ninety degrees from the pole is the celestial equator, a great circle that runs from directly east to directly west, passing high above our southern horizon. Another important great circle is the meridian, which runs from directly north to directly south, passing straight overhead. As the sphere turns, the meridian remains fixed in the sky. The point straight overhead is called zenith. What about other locations? Moving east or west makes no difference, except to determine when you see things. We compensate for these differences, in an approximate way, by setting our clocks according to different time zones. Moving north or south is more interesting. In fact, the angle between your northern horizon and the north celestial pole is precisely equal to your latitude. Stars below your horizon that is, south of the celestial equator would always be hidden from your view. The Big Dipper will no longer always be visible, setting in the northwest and rising in the northeast instead. From here, as the constellations rise in the east, they appear to head straight up, rather than along a diagonal. In the west, they head straight down as they set. Even more stars are visible in the southern sky, making clockwise half-circles about a point on the southern horizon, the south celestial pole. The south celestial pole, however, will appear above your southern horizon, by an angle equal to your southern latitude. Stars rising in the east will head upward and to the left, toward the northern sky. The celestial equator will also pass through the northern sky, lower and lower as you head farther south. This several-hour-long time exposure, taken from tropical northern Australia, shows the clockwise motion of the southern stars around the south celestial pole. The trails of the Southern Cross start at the top of the image, with the top of the cross initially above the edge. The ancient Greeks conceived the universe as a giant sphere of stars, surrounding the much smaller spherical earth. In this modern plastic model, however, the size of the earth is greatly exaggerated in comparison to the celestial sphere. The celestial equator will lie on your horizon, with the stars moving parallel to it, from right to left. So when you travel to a different location, your horizon tilts with respect to the stars. Today every school child is taught that the earth is approximately a sphere. Even in ancient times, however, astute travelers realized that the changes in the stars as you travel north or south must be caused by the curvature of the earth.

6: Year | Define Year at www.enganchecubano.com

On Earth the seasons are primarily caused by the changing the "directness" of the sunlight over the course of a year, which is due in turn to the Earth's tilt. -A secondary effect is the amount of time the Sun spends above the horizon in different seasons.

Business Cycles ; Fiscal Year Most businesses experience some ebb and flow in business and in many cases these fluctuations correspond with the seasons. Seasonal business is a term that refers to the fluctuations in business that correspond to changes in season. Season can be understood in this context to include a seasons of the year and their weather-related changes, b holidays, and c events like the summer school holiday, the fall return to school, or the Super Bowl. Although most businesses experience some seasonal business fluctuations, others experience severe seasonal fluctuations and may even limit their operations to particular seasons. Examples of such businesses include operators of vacation cottages, lawn care service businesses, and businesses that contract to do snow removal. Many retail businesses have a strong seasonal component and see the majority of their profits generated in one or two seasons of the year, the year-end or Christmas season being a typically busy period. There are predictable events that can influence sales in every month of the year. These seasonal events affect different industries and businesses differently. For example, January is a good month for health club memberships as well as self-help books and programs. In March, attendance at church and other religious activities jumps 60 percent. June features a lot of family activities, such as weddings, graduations, and vacations. July is the best month for all summer products. August is the busiest travel month of the year. September features back-to-school sales, while October is a marketing bonanza thanks to Halloween and the World Series. Examples include vacation resorts, which in some regions of the United States are only open for part of the year spring and summer in the northern U. Smaller-scale examples include snow removal services, pool cleaning services in the northern U. If it is feasible, a business that relies heavily on one season tries to at least make some money during the remaining months of the year. If it absolutely cannot turn a profit, then the business often closes during its off-season to avoid paying employees and to reduce the cost of supplies and overhead. For example, in the northern United States, ice cream shops other than those located inside shopping malls simply close for the winter once the temperature dips down to the freezing level. On the other hand, some lawn care businesses in the northern United States may attempt to put their equipment and machinery to use during their off-season by cultivating a snow removal service in the winter months. The movie industry remains one of the largest industries in the world driven by seasonal buying habits. The two biggest seasons of the year for the movie industry are summer and winter. Movie theaters do not shut down like some other seasonal businesses, but they hire extra employees for those two seasons and create budgets that reflect the dominance of those two seasons. High-budget, wide-appeal movies that have blockbuster potential are usually released in the summer, often at either the Memorial Day or Fourth of July holiday weekend. Around Christmas, the studios release serious pictures expected to gain Academy Award attention together with big-budget films that are aimed at the entire family. Perhaps the best example of this, in cold climates, is the amount of snow that falls. Snowfall levels can affect any number of businesses, from ski resorts to hardware stores that sell snowblowers, salt, and chemical de-icers. The reverse of this situation for summer resorts is a summer that is colder and rainier than usual. One winter can be extremely snowy, while the next can see almost no snowfall, with very little chance of consistently predicting which way a winter will turn out in advance. Some businesses use this uncertainty to their advantage, offering unique sales pitches revolving around the snow, or lack of it. For example, it is not unusual for a creative hardware store to run a special on snowblowers late in the fall. As a gimmick to lure buyers, the store offers to refund the entire purchase price of a new snowblowers if a certain amount of snow does not fall that winter. If the snow does fall, then all sales are final, and the merchant was able to sell all his snowblowers at full price. If the snow does not fall, then the merchant normally has taken out a special insurance policy that will cover most of his or her losses from the special sale, which has now turned out to be a worst-case scenario. Businesses that offer this kind of seasonal gimmick usually do their homework before they make what seems

to be an outlandish offer. The two most important factors are managing cash flow and hiring the right employees. Cash flow management is important to any business but for companies whose cash flow fluctuates dramatically from one period to the next this task is especially critical. Cash flow management does not need to be mysterious or complex. Cash flow management is, quite simply, all about timing cash inflows and outflows. Since a seasonal business can anticipate the inflows being heavier during one period than in others the key is to match the outflows to the same period as much as possible and create reserves to use during the off-season. Finding and keeping good employees is another key to succeeding in a seasonal business. Paying well and creating a positive work environment are obvious ways to gain good employees, but there are other tactics a small business owner can use. Keeping employees informed of how the seasonal shift affects the company is a good idea, as the employees feel as if they matter more and are an important part of the business. It also helps employees identify the best time to take a vacation. When hiring new employees, two sources of good seasonal employees should be kept foremost in mind—students and retirees. Retirees tend to make good employees because they may have years of experience in their field, but they no longer desire to work full time. Therefore, a job that lasts a few months each year is perfect. One other tactic that seasonal business owners can use to succeed is to expand their business to include a new product line that is seasonal in the opposite way as their original line. For example, a lawn and garden company that sells lawn mowers and offers mowing and landscaping services can add snowblowers to their product mix and offer snow removal services to complement their landscaping services. The new product should be similar to the existing product so that an owner does not have to learn a brand new business or invest a great deal of money. This type of seasonal business is driven by holidays or events that greatly influence consumer spending. Christmas is by far the largest holiday that creates seasonal shopping. In fact, it is not unusual for many retail businesses to see sales rise by 15 percent above normal monthly sales in December and then drop 30 percent below normal monthly sales in January each year. These events are held at the same time each year, which makes it easy for a businessperson to establish an annual schedule. The Family Business in Tourism and Hospitality. As retailers jockey for seasonal sales, the most popular costumes come from movies and TV. Car washing is more than a seasonal business. After the Christmas glut, the gifting engine shows no signs of dieting. Turn your passion for a specific holiday into a thriving business by getting your timing right.

7: Cubs expect Kris Bryant to rebound with a 'monster' season in | NBC Sports Chicago

The seasons are, of course, reversed for the southern hemisphere. The solstices mark the two dates during the year on which the Earth's position in its orbit is such that its axis of rotation is most tilted toward or away from the Sun.

Meteorological and Astronomical When do spring, summer, fall, and winter start and end? It depends on which definition you use and if you are north or south of the equator. The four seasons are spring, summer, fall autumn, and winter. This is why we have seasons. In most cultures, including all western countries, the year is commonly divided into four seasons: Spring Fall or Autumn Winter Since the year has 12 months, each season lasts about three months. However, the dates when the seasons begin and end vary depending on whom you ask. Two methods are most commonly used to define the dates of the seasons: Summer begins on the summer solstice; Fall autumn begins on the fall equinox; and Winter begins on the winter solstice. The beginning of each season marks the end of the last. Because the timings of the equinoxes and solstices change each year, the length of astronomical seasons within a year and between years also vary. Equinoxes and solstices dates worldwide Northern Meteorological Seasons According to the meteorological definition, the seasons begin on the first day of the months that include the equinoxes and solstices: When the Northern Hemisphere gets most sunlight summer, the Southern Hemisphere gets least winter. Seasons in the Southern Hemisphere are opposite to those in the Northern Hemisphere. For example, under the definition of astronomical seasons, the June solstice marks the start of summer in the Northern Hemisphere, but it is the start of winter in the Southern Hemisphere. The same rule applies for the other seasons. The meteorological seasons in the Southern Hemisphere are also opposite to those in the Northern Hemisphere: Spring starts September 1 and ends November 30; Summer starts December 1 and ends February 28 February 29 in a Leap Year; Fall autumn starts March 1 and ends May 31; and Winter starts June 1 and ends August 31; Different Countries, Different Seasons The question which definition to use divides countries and regions around the world. In many other countries, both definitions are used, depending on the context. Some cultures, especially those in South Asia have calendars that divide the year into six seasons, instead of the four that most of us are familiar with. In Finland and Sweden, the dates of the seasons are not based on the calendar at all, but on temperatures. This means that the seasons within each county start and end on different dates, depending on the regions and their climate.

8: Reasons Why Autumn Is the Best Season | Holidayppy

Tilting Into The Seasons the course of the day and from season to season. either of two times of the year when the sun is farthest from.

As a result, when the Earth is at a certain place in its orbit, the northern hemisphere is tilted toward the Sun and experiences summer. Six months later, when the Earth is on the opposite side of the Sun, the northern hemisphere is tilted away from the Sun and experiences winter. The seasons are, of course, reversed for the southern hemisphere. These are the dates when the days are longest for the hemisphere tilted toward the Sun where it is summer and shortest for the opposite hemisphere where it is winter. However, there is a complication. It is somewhat elliptical, which means that the distance between the Earth and the Sun varies over the course of the year. This effect is too weak to cause the seasons, but it might have some influence over their severity. The remainder of this page explains this possibility. The Earth reaches perihelion – the point in its orbit closest to the Sun – in early January, only about two weeks after the December solstice. Thus winter begins in the northern hemisphere at about the time that the Earth is nearest the Sun. Is there a reason why the times of solstice and perihelion are so close? It turns out that the proximity of the two dates is a coincidence of the particular century we live in. The date of perihelion does not remain fixed, but, over very long periods of time, slowly regresses moves later within the year. The Length of the Year We can measure the length of the year in several different ways. The length of the year from equinox to equinox equivalently, solstice to solstice is called the tropical year, and its length is the basis for our Gregorian civil calendar. Basically, the tropical year is the year of a complete cycle of seasons, so it is natural that we use it for ordinary purposes. But we can also measure the length of the year from perihelion to perihelion, which is called the anomalistic year. On average, the anomalistic year is about 25 minutes longer than the tropical year, so the date of perihelion slowly shifts over time, regressing by about 1 full day every 58 years. The date of perihelion thus moves completely through the tropical year in about 21, years. It is important to note that we are talking about long-term trends here. There are small year-to-year variations in the dates and times of solstice and perihelion due to our leap-year cycle and the effect of the Moon on the motion of the Earth. But the direction is not quite constant: So Polaris has not always been, and will not always be, the pole star. At the same time, the orbit itself is subject to small changes, called perturbations. Because we use a calendar year that is aligned to the occurrence of the seasons, the date of perihelion gradually regresses through the year. As mentioned above, it takes 21, years to make a complete cycle of dates. That is, whether perihelion occurs in January or July, it seems unlikely that our seasons would be much affected. The eccentricity of the orbit varies periodically with a time scale of about , years. So, it would be reasonable to suppose that if the 21,year perihelion shift cycle were to have any effect on climate at all, it would only be during the more widely-spaced epochs when the orbital eccentricity was relatively large. That is, climatologically, the ,year cycle of eccentricity should modulate the 21,year cycle of perihelion. This variation is different from precession – the two motions are at right angles to each other – and astronomically is a much smaller effect. The obliquity varies by only a few degrees back and forth, and the current value of However, climatologically, the obliquity variation has the potential to have a fairly direct effect on seasonal extremes. Astronomically Induced Climate Change The astronomical cycles described above are called Milankovitch cycles after Milutin Milankovitch, a Serbian scientist who provided a detailed theory of their potential influence over climate in the s. Although the Milankovitch theory is well-grounded astronomically, it remains controversial. The theory predicts different effects at different latitudes, and thus its use as a predictor of global or at least hemispheric climate change is not unambiguous. The 21,year perihelion cycle and the 41,year obliquity cycle do in fact appear to be present in the climatological record. But the dominant climate cycle that is seen has a period of about , years. Given the long history of controversy in this field, however, it seems unlikely that this will be the final word. A very readable book on the whole subject of ice ages and the development of the astronomical theories for their origin is Ice Ages: The book obviously does not cover the latest research, but provides an excellent background and historical context. An Internet search on "Milankovitch cycles" will

provide links to additional information.

9: Understanding Astronomy: The Sun and the Seasons

There is a different reason for Earth's seasons. Earth's axis is an imaginary pole going right through the center of Earth from "top" to "bottom." Earth spins around this pole, making one complete turn each day.

Below is a description of each of the four turnings, including which generational archetype fills each phase of life during that type of era. The descriptions refer to a four-phase model of social change devised by the famous sociologist Talcott Parsons, who hypothesized that society moves into a new phase every time the availability or demand for social order rises or falls. Old Prophets die, Nomads enter elderhood, Heroes enter midlife, Artists enter young adulthood and a new generation of Prophets is born. This is an era when institutions are strong and individualism is weak. Society is confident about where it wants to go collectively, even if those outside the majoritarian center feel stifled by the conformity. Coming of age during this High was the Artist archetype Silent Generation born to Known for their caution, conformity, and institutional trust, Silent young adults embodied the ethos of the High. Examples of earlier First Turnings include the post-Civil War Reconstruction Era, sometimes called the Victorian High of industrial growth and stable families, and the post-Constitution Era of Good Feelings, when Thomas Jefferson celebrated the advance of science and empire. Old Nomads die, Heroes enter elderhood, Artists enter midlife, Prophets enter young adulthood and a new generation of child Nomads is born. This is an era when institutions are attacked in the name of personal and spiritual autonomy. Just when society is reaching its high tide of public progress, people suddenly tire of social discipline and want to recapture a sense of personal authenticity. Young activists and spiritualists look back at the previous High as an era of cultural poverty. Coming of age during this Awakening was the Prophet archetype Boom Generation born to, whose passionate idealism and search for authentic self-expression epitomized the mood of the era. Old Heroes die, Artists enter elderhood, Prophets enter midlife, Nomads enter young adulthood and a new generation of child Heroes is born. The mood of this era is in many ways the opposite of a High. Institutions are weak and distrusted, while individualism is strong and flourishing. Highs follow Crises, which teach the lesson that society must coalesce and build. Unravelings follow Awakenings, which teach the lesson that society must atomize and enjoy. Coming of age during this Unraveling was the Nomad archetype Generation X born to, whose pragmatic, free-agent persona and Survivor-style self-testing have embodied the mood of the era. These were all periods of cynicism and bad manners, when civic authority felt weak, social disorder felt pervasive, and the culture felt exhausted. Old Artists die, Prophets enter elderhood, Nomads enter midlife, Heroes enter young adulthood and a new generation of child Artists is born. Civic authority revives, cultural expression finds a community purpose, and people begin to locate themselves as members of a larger group. The generation that came of age during this Fourth Turning was the Hero archetype G. Generation born to, whose collective spirit and can-do optimism epitomized the mood of the era. Examples of earlier Fourth Turnings include the Civil War in the 1860s and the American Revolution in the 1770s both periods of momentous crisis, when the identity of the nation hung in the balance. Moods of the Four Turnings Generation Entering.

The effects of Goodmans nominalism and worldmaking on his aesthetics. Spinning For Fresh Water Game Fish Franchising and the law Bill Nye and Boomerang or The Tale of a Meek Eyed Mule and Other Literary Gems Beowulf With the Finnesburg Fragment (Exeter Medieval English Texts and Studies) Thermodynamics, Statistical Thermodynamics, and Kenetics The wake-up call: the new dawn and local radios place in the new duopoly (1973-1983) The myth of the birth of the hero Otto Rank Typography now-the next wave Rapture and redemption in the virtual world Mark Slouka 06 honda cbr600rr service manual Faith, Hope And Marriage (Kids Kisses) Declaration of independence rhetorical analysis 2011 nec code handbook Psychology of Fear Blood captive by izzy shows Telephone Techniques Frederick R. Oyer Easy programming for the Electron American Jewish liturgies The Section 8 project-based assistance program An Anthology of Turkish Literature Family Therapy (Life Balance) Inculturation and liturgy : some conciliar and post conciliar reflections from India Paul Pulikkan A season for unicorns Orderly Korea Unification How to Raise Childrens Self-Esteem (The Whole Child Series) The Makers of Trinity Church in the City of Boston A just and modest vindication of the Scots design The congresswomen (Ecclesiazusae). Challenging behaviour : ours, not theirs Karen Dunn. Island of the Walking Dead 2 (Chuck Norris and the Karate Kommandos, No 2) Extend the benefits of the Hatch Act and the Smith-Lever Act to the Territory of Alaska. Paragraph writing worksheets grade 4 The carpetbaggers by harold robbins Radiative Corrections in Su (2l X U) Robert ludlum jason bourne series History of the origin of the town of Clinton, Massachusetts, 1653-1865 Seventy years of Irish life How absurd! But thats what they heard