

Chapter 1 : White - Wikipedia

White is the lightest color and is achromatic (having no hue). It is the color of fresh snow, chalk, and milk, and is the opposite of black. It is the color of light that is composed of all the visible wavelengths of light.

Unfortunately, I did not turn out to be a good clock. The speed of light in a vacuum is a universal constant in all reference frames. The speed of light in a medium is always slower than the speed of light in a vacuum. The speed of light depends upon the medium through which it travels. The speed of anything with mass is always less than the speed of light in a vacuum. Brightness is the relative intensity as perceived by the average human eye. The frequency of a light wave is related to its color. Color is such a complex topic that it has its own section in this book. Monochromatic light is described by only one frequency. Laser light is effectively monochromatic. There are six simple, named colors in English and many other languages each associated with a band of monochromatic light. In order of increasing frequency they are red, orange, yellow, green, blue, and violet. Light is sometimes also known as visible light to contrast it from "ultraviolet light" and "infrared light". Other forms of electromagnetic radiation that are not visible to humans are sometimes also known informally as "light". Polychromatic light is described by many different frequencies. Nearly every light source is polychromatic. White light is polychromatic. A graph of relative intensity vs. wavelength is frequently associated with light, the term can be applied to any wave phenomena. A continuous spectrum is one in which every frequency is present within some range. Blackbody radiators emit a continuous spectrum. A discrete spectrum is one in which only a well defined set of isolated frequencies are present. A discrete spectrum is a finite collection of monochromatic light waves. The excited electrons in a gas emit a discrete spectrum. The wavelength of a light wave is inversely proportional to its frequency. Phase differences between light waves can produce visible interference effects. There are several sections in this book on interference phenomena and light. A falcon can see a 10 cm flicker fusion rate is the frequency with which the "flicker" of an image cannot be distinguished as an individual event. Like the frame of a movie, if you slowed it down, you would see individual frames. Speed it up and you see a constantly moving image. A penguin has a flat cornea that allows for clear vision underwater. Penguins can also see into the ultraviolet range of the electromagnetic spectrum. A sparrow retina has 100,000 photoreceptors per square millimeter. A reindeer can see ultraviolet wavelengths, which may help them view contrasts in their mostly white environment.

Chapter 2 : Lyrics containing the term: white light

Other light bulbs, like the incandescent lamp, do not produce white light. They produce light of much longer wavelengths along the yellow to red range. Spectrum.

Doing white light healing meditation on a regular basis increases your awareness of yourSelf as Light. This unlocks our natural healing capacity and increases our overall wellbeing. It is an awesome way to start the day! As you practice it, you can adapt, change, and abbreviate it, according to what is needed at the time.

White Light Healing Chakra Meditation Sit back and relax in a chair that supports your back and your body comfortably. Bring your attention to your breathing, without trying to change it. Just observe it as you breathe in and out for a few minutes. Then, to do the meditation, you can read a section at a time, closing your eyes to do each step, or record it in your own voice and then listen to it. Slow down and focus attention on the words. A stream of pure White Light Healing Energy flows down from Source and into the top of my head â€” a glorious waterfall of pure unconditional Love, wellbeing, vitality and joy, straight from the Heart of Creator, flowing into my being. This pure White Light Healing Energy shines like millions of diamonds, reflecting all the colors of the rainbow, each color carrying a specific ray of healing and nourishment into all levels of my Being. I breathe this stream into the top of my head, through my Crown Chakra. Healing Light flows into every cell of my being, enlightening, enlivening and nurturing me. I breathe in this White Light Healing Energy all the way down to the soles of my feet, out my feet and deep into the core of Mother Earth. I AM creating a permanent, continuous corridor of Light from the Heart of Source, down through all levels of my being and deep into Beloved Mother Earth. This Healing Light circulates through me and I surrender and release everything that has veiled or obscured Love. Old residues and dense particles of energy are consumed by this White Light, immediately burning up in its brilliance. I breathe in pure White Light, Love and clarity. I release everything that has blocked my reception of the Highest Light and Love of Source. I ask this White Light Healing Energy to open my inner vision to a broader, light-filled, continually expanding perspective. From the top of my head, I breathe the pure Healing Light and Love of Source into my Throat Chakra at the base of my throat, my place of speaking and being my Truth. I release everything that veils the Truth of Who I Am. Still breathing in White Diamond Light into the crown of my head, I breathe it down into my Heart Chakra, expanding my Heart in a brilliant sphere of pure White Light, radiating out in all directions. In this Light Healing, I release everything that has veiled love. I AM a unity of Light. As I continue breathing in pure White Light Healing Energy from the crown of my head down, I breathe it into my Sacral Chakra just below my navel â€” my child chakra. I feel a beautiful and innocent child alive within me. I surrender everything that veils Light. Here I feel my tribal connection with Mother Earth and all my fellow human beings. I release all separating and constricting imprints stored in my Root Chakra. With each breath, this Healing Light expands out in a brilliant sphere of White Light all around my physical body. It now includes my Alpha Chakra, above my head, and my Omega Chakra, just below my spine. I AM a unified field of pure, brilliant White Light, within, through and around my body. Each breath I take expands this Unified Field of Light even further. Healing Light is now permeating my Emotional Body. This pure White Light floods all my emotions with Light Healing and cleansing. I release everything within my Emotional Body that has obscured the Light. I AM a unified field of pure, brilliant White Light, within, through and around all levels of my being. I breathe out this Diamond Light through my Heart Center to all human kind. Still expanding out with each in-breath, this Unified Field of Light extends out even further. I invoke the Healing Light of God to transmute the cause, core, effect, habit, record and memory of every thought, feeling, word or action I have ever expressed in any time frame or dimension, known or unknown, that reflects limitation of any kind. I ask this White Light Healing Energy to transmute every electron of precious Life Energy that has my signature on it in any place and time that reflects anything less than the Infinite Perfection of God. I breathe out this Healing Light through my Heart Center to all human kind, so that all life can partake of this healing energy. I continue expanding into even more brilliant regions of White Light Healing Energy with each breath I take. This Healing Light is now expanding into my Mental Body, permeating all my thoughts with pure White Light and

wellbeing. I let go of all limiting ideas, thoughts and beliefs. With each in-breath I continue expanding into even higher, more refined spheres of White Light Healing Energy. This Healing Light now expands into my Etheric Body, permeating all subtle and psychic energies with pure Diamond Light. I let go of all limiting energetic connections. I AM a unified field of pure, radiant, White Light, within, through and around all levels of my being. I breathe out this Healing Light through my Heart Center, consecrating every facet of my being as a channel for Source to use for all Humanity. My in-breath continues to expand the unified field of White Light Healing Energy even further. I consciously expand into my I AM Presence. I AM a unified field of pure, radiant, White Light, within, through and around all levels and dimensions of my being. I AM a unified field of the pristine, radiant Perfection of God, within, through and around all levels and dimensions of my being. I AM a continuous, unified field of White Light Healing Energy within, through, and around all dimensions and levels of my being. I radiate forth throughout this day as pure White Light Healing Energy. I AM Unity of Spirit. I ask this Light to anchor itself in my Heart Center. In deep humility and profound gratitude, I ask that this Healing Light of God shine through me to all life, claiming me as a channel for the Highest Love, Light and Healing, for Beloved Mother Earth and all who live here, including myself. I accept this White Light Healing. And so it is. I offer WellBeing Alignment Sessions to help you. These coaching sessions have an organic flow of their own depending on your needs when we meet, encompassing many different facets of two main components: Your attention will be turned directly toward noticing the aware, calm, alive, awake Beingness you already are beneath your thoughts. You will be guided and encouraged to get to know yourself as this true reality of freedom and peace. You will learn various ways to allow all your sensations, feelings, thoughts, and everything within you and in your experience to be as it is, allowing suffering to unwind on its own.

Chapter 3 : Dispersion of Light by Prisms

The White Light Myth Filling up with white light is the last thing you want to do to protect yourself or your aura. The problem is that white resonates with what psychics call "unconscious energy," i.e., energy that makes you go unconscious.

Church interiors were designed to show the power, glory and wealth of the church. They seemed to be alive, filled with curves, asymmetry, mirrors, gilding, statuary and reliefs, unified by white. White was also a fashionable color for both men and women in the 18th century. Men in the aristocracy and upper classes wore powdered white wigs and white stockings, and women wore elaborate embroidered white and pastel gowns. Because of the rather revealing design of these dresses, the ladies wearing them were called *les merveilles* the marvellous by French men of that era. It was unthinkable to have sheets or underwear of any other color. The reason was simple; the manner of washing linen in boiling water caused colors to fade. When linen was worn out, it was collected and turned into high-quality paper. His painting *Symphony in White No. President George Washington* in a white powdered wig. The first five Presidents of the United States wore dark suits with powdered wigs for formal occasions. The State Hermitage Museum. *Symphony in White No.* It was finally defeated by the Bolsheviks in 1922, and many of its members emigrated to Europe. At the end of the 19th century, lead white was still the most popular pigment; but between and , chemical companies in Norway and the United States began to produce titanium white , made from titanium oxide. It had first been identified in the 18th century by the German chemist Martin Klaproth , who also discovered uranium. It had twice the covering power of lead white, and was the brightest white pigment known. By , 80 percent of the white pigments sold were titanium white. His most famous paintings consisted of a pure white canvas with grid of vertical and horizontal black lines and rectangles of primary colors. Black and white also appealed to modernist architects, such as Le Corbusier . He said a house was "a machine for living in" and called for a "calm and powerful architecture" built of reinforced concrete and steel, without any ornament or frills. Scientific understanding Color science [edit] Light is perceived by the human visual system as white when the incoming light to the eye stimulates all three types of color sensitive cone cells in the eye in roughly equal amounts. White light[edit] In the RGB color model , used to create colors on TV and computer screens, white is made by mixing red, blue and green light at full intensity. White light refracted in a prism revealing the color components. In , Isaac Newton demonstrated that white light could be broken up into its composite colors by passing it through a prism , then using a second prism to reassemble them. Before Newton, most scientists believed that white was the fundamental color of light. White light can be generated by the sun, by stars, or by earthbound sources such as fluorescent lamps, white LEDs and incandescent bulbs. On the screen of a color television or computer, white is produced by mixing the primary colors of light: White light can be fabricated using light with only two wavelengths, for instance by mixing light from a red and cyan laser or yellow and blue lasers. This light will however have very few practical applications since color rendering of objects will be greatly distorted. The fact that light sources with vastly different spectral power distributions can result in a similar sensory experience is due to the way the light is processed by the visual system. One color that arises from two different spectral power distributions is called a metamerism. Many of the light sources that emit white light emit light at almost all visible wavelengths sun light, incandescent lamps of various Color temperatures. This has led to the notion that white light can be defined as a mixture of "all colors" or "all visible wavelengths". Concluding that since "all colors" produce white light then white must be made up of "all colors" is a common logical error called affirming the consequent , which might be the cause of the misunderstanding. A range of spectral distributions of light sources can be perceived as white . there is no single, unique specification of "white light". For example, when you buy a "white" light bulb, you might buy one labeled K, K, etc. In order to do so, color constancy can keep the perceived color of an object relatively unchanged when the illumination changes among various broad whitish spectral distributions of light. Changes in or manipulation of the white point can be used to explain some optical illusions such as The dress. While there is no single, unique specification of "white light", there is indeed a unique specification of

"white object", or, more specifically, "white surface". If the reflection is not diffuse but rather specular, this describes a mirror rather than a white surface. The International Commission on Illumination defines white adapted as "a color stimulus that an observer who is [chromatically] adapted to the viewing environment would judge to be perfectly achromatic and to have a luminance factor of unity. The color stimulus that is considered to be the adapted white may be different at different locations within a scene. Cumulus clouds look white because the water droplets reflect and scatter the sunlight without absorbing other colors. The White Cliffs of Dover, made of limestone Hyams Beach, New South Wales appears white because the sunlight is reflected or scattered by the quartz or limestone sand Beaches with sand containing high amounts of quartz or eroded limestone also appear white, since quartz and limestone reflect or scatter sunlight, rather than absorbing it. Tropical white sand beaches may also have a high quantity of white calcium carbonate from tiny bits of seashells ground to fine sand by the action of the waves. Snow is a mixture of air and tiny ice crystals. When white sunlight enters snow, very little of the spectrum is absorbed; almost all of the light is reflected or scattered by the air and water molecules, so the snow appears to be the color of sunlight, white. Sometimes the light bounces around inside the ice crystals before being scattered, making the snow seem to sparkle. As sunlight enters the ice, more light of the red spectrum is absorbed, so the light scattered will be bluish. They are composed of water droplets or ice crystals mixed with air, very little light that strikes them is absorbed, and most of the light is scattered, appearing to the eye as white. Shadows of other clouds above can make clouds look gray, and some clouds have their own shadow on the bottom of the cloud. Changbai Mountains literally meaning perpetually white mountains, marks the border between China and Korea. White materials[edit] Titanium white, made with titanium dioxide, is the brightest white paint available. It also colors most toothpaste and sunscreen. Zinc white is made from zinc oxide. Zinc oxide is used in paints, suntan lotion, and breakfast cereals. Chalk is a kind of limestone, made of the mineral calcite, or calcium carbonate. It was originally deposited under the sea as the scales or plates of tiny micro-organisms called Coccolithophore. It was the first white pigment used by prehistoric artists in cave paintings. The chalk used on blackboards today is usually made of gypsum or calcium sulphate, a powder pressed into sticks. Bianco di San Giovanni is a pigment used in the Renaissance, which was described by the painter Cennino Cennini in the 15th century. It is similar to chalk, made of calcium carbonate with calcium hydroxide. It was made of dried lime which was made into a powder, then soaked in water for eight days, with the water changed each day. It was then made into cakes and dried in the sun. Pieces of lead were put into clay pots which had a separate compartment filled with vinegar. The pots in turn were piled on shelves close to cow dung. The combined fumes of the vinegar and the cow dung caused the lead to corrode into lead carbonate. It was a slow process which could take a month or more. It made an excellent white and was used by artists for centuries, but it was also toxic. It was replaced in the 19th century by zinc white and titanium white. It first became commercially available in It is made out of titanium dioxide, from the minerals brookite, anatase, rutile, or ilmenite, currently the major source. Because of its brilliant whiteness, it is used as a colorant for most toothpaste and sunscreen. It is similar to but not as opaque as titanium white. It is added to some breakfast cereals,[citation needed] since zinc is an important nutrient. Chinese white is a variety of zinc white made for artists. Some materials can be made to look "whiter than white", this is achieved using optical brightener agents OBA. These are chemical compounds that absorb light in the ultraviolet and violet region usually ≈ 360 nm of the electromagnetic spectrum, and re-emit light in the blue region typically ≈ 440 nm. OBAs are often used in paper and clothing to create an impression of very bright white. This is due to the fact that the materials actually send out more visible light than they receive. Bleach and bleaching[edit] Bleaching is a process for whitening fabrics which has been practiced for thousands of years. Sometimes it was simply a matter of leaving the fabric in the sun, to be faded by the bright light. In the 18th century several scientists developed varieties of chlorine bleach, including sodium hypochlorite and calcium hypochlorite bleaching powder. While most bleaches are oxidizing agents, a few are reducing agents such as sodium dithionite. Bleaches attack the chromophores, the part of a molecule which absorbs light and causes fabrics to have different colors. An oxidizing bleach works by breaking the chemical bonds that make up the chromophore. This changes the molecule into a different substance that either does not contain a chromophore, or contains a chromophore that

does not absorb visible light. A reducing bleach works by converting double bonds in the chromophore into single bonds. This eliminates the ability of the chromophore to absorb visible light. High energy photons of light, often in the violet or ultraviolet range, can disrupt the bonds in the chromophore, rendering the resulting substance colorless. Sirius B, a white dwarf, is the faint pinprick of light to the lower left of the much brighter Sirius A. A white dwarf is a stellar remnant composed mostly of electron-degenerate matter. Its faint luminosity comes from the emission of stored thermal energy. A white dwarf is very hot when it is formed, but since it has no source of energy, it will gradually radiate away its energy and cool down. This means that its radiation, which initially has a high color temperature, will lessen and redden with time. Over a very long time, a white dwarf will cool to temperatures at which it will no longer emit significant heat or light, and it will become a cold black dwarf.

Chapter 4 : White Light Healing - Chakra Meditation

Define white light. white light synonyms, white light pronunciation, white light translation, English dictionary definition of white light. n. Electromagnetic radiation of all the frequencies in the visible range of the spectrum, appearing white to the eye. n light that contains all the.

Visible light, also known as white light, consists of a collection of component colors. These colors are often observed as light passes through a triangular prism. Upon passage through the prism, the white light is separated into its component colors - red, orange, yellow, green, blue and violet. The separation of visible light into its different colors is known as dispersion. It was mentioned in the Light and Color unit that each color is characteristic of a distinct wave frequency; and different frequencies of light waves will bend varying amounts upon passage through a prism. In this unit, we will investigate the dispersion of light in more detail, pondering the reasons why different frequencies of light bend or refract different amounts when passing through the prism. Earlier in this unit, the concept of optical density was introduced. Different materials are distinguished from each other by their different optical densities. The optical density is simply a measure of the tendency of a material to slow down light as it travels through it. As mentioned earlier, a light wave traveling through a transparent material interacts with the atoms of that material. When a light wave impinges upon an atom of the material, it is absorbed by that atom. The absorbed energy causes the electrons in the atom to vibrate. If the frequency of the light wave does not match the resonance frequency of the vibrating electrons, then the light will be reemitted by the atom at the same frequency at which it impinged upon it. The light wave then travels through the interatomic vacuum towards the next atom of the material. Once it impinges upon the next atom, the process of absorption and re-emission is repeated. The optical density of a material is the result of the tendency of the atoms of a material to maintain the absorbed energy of the light wave in the form of vibrating electrons before reemitting it as a new electromagnetic disturbance. Thus, while a light wave travels through a vacuum at a speed of c . The index of refraction value n provides a quantitative expression of the optical density of a given medium. Materials with higher index of refraction values have a tendency to hold onto the absorbed light energy for greater lengths of time before reemitting it to the interatomic void. The more closely that the frequency of the light wave matches the resonant frequency of the electrons of the atoms of a material, the greater the optical density and the greater the index of refraction. A light wave would be slowed down to a greater extent when passing through such a material. What was not mentioned earlier in this unit is that the index of refraction values are dependent upon the frequency of light. For visible light, the n value does not show a large variation with frequency, but nonetheless it shows a variation. For instance for some types of glass, the n value for frequencies of violet light is 1. The absorption and re-emission process causes the higher frequency lower wavelength violet light to travel slower through crown glass than the lower frequency higher wavelength red light. It is this difference in n value for the varying frequencies and wavelengths that causes the dispersion of light by a triangular prism. Violet light, being slowed down to a greater extent by the absorption and re-emission process, refracts more than red light. Upon entry of white light at the first boundary of a triangular prism, there will be a slight separation of the white light into the component colors of the spectrum. The Angle of Deviation The amount of overall refraction caused by the passage of a light ray through a prism is often expressed in terms of the angle of deviation. The angle of deviation is the angle made between the incident ray of light entering the first face of the prism and the refracted ray that emerges from the second face of the prism. Because of the different indices of refraction for the different wavelengths of visible light, the angle of deviation varies with wavelength. Colors of the visible light spectrum that have shorter wavelengths BIV will deviated more from their original path than the colors with longer wavelengths ROY. The emergence of different colors of light from a triangular prism at different angles leads an observer to see the component colors of visible light separated from each other. Of course the discussion of the dispersion of light by triangular prisms begs the following question: The short answer is that it does. The long answer is provided in the following discussion and illustrated by the diagram below. Suppose that a flashlight could be covered with black paper with a slit across it so as to create a beam of white light. And suppose that the beam

of white light with its component colors unseparated were directed at an angle towards the surface of a rectangular glass prism. As would be expected, the light would refract towards the normal upon entering the glass and away from the normal upon exiting the glass. But since the violet light has a shorter wavelength, it would refract more than the longer wavelength red light. The refraction of light at the entry location into the rectangular glass prism would cause a little separation of the white light. However, upon exiting the glass prism, the refraction takes place in the opposite direction. The light refracts away from the normal, with the violet light bending a bit more than the red light. Unlike the passage through the triangular prism with non-parallel sides, there is no overall angle of deviation for the various colors of white light. Both the red and the violet components of light are traveling in the same direction as they were traveling before entry into the prism. There is however a thin red fringe present on one end of the beam and thin violet fringe present on the opposite side of the beam. This fringe is evidence of dispersion. Because there is a different angle of deviation of the various components of white light after transmission across the first boundary, the violet is separated ever so slightly from the red. Upon transmission across the second boundary, the direction of refraction is reversed; yet because the violet light has traveled further downward when passing through the rectangle it is the primary color present in the lower edge of the beam. The same can be said for red light on the upper edge of the beam. Dispersion of light provides evidence for the existence of a spectrum of wavelengths present in visible light. It is also the basis for understanding the formation of rainbows. Rainbow formation is the next topic of discussion in Lesson 4.

Chapter 5 : The Nature of Light – The Physics Hypertextbook

Metal Halide: The "Other" White Light Jay Busch -LC, LEED-AP, Commercial Engineer On behalf of the NEMA Lamp Section. October 5, 83 years of excellence.

Intuitive Readings The White Light Myth Filling up with white light is the last thing you want to do to protect yourself or your aura. The problem is that white resonates with what psychics call "unconscious energy," i. So if you have lots of white in your upper chakras then what happens is all kinds of spirits can plug into you and toy with you. There is a name for people that do this professionally: They use white to help them leave their bodies so that another spirit may enter. To really protect yourself energetically, you want to actually be in your body, rather than out of it. So eventually, you have to work with white, but it takes years before most people have enough clairvoyant, and body, seniority to do it without it destroying their lives. Debra Katz writes in her books about how professional channelers are often alcoholics, because the energy they channel is so harsh that they have no other way of dealing with it. So unless you want to be an open channel for every being on the block, it would be a good idea to avoid surrounding yourself with white. Surrounding yourself with gold is a much better idea. Some people do, however, like the idea that all of their dead ancestors, spirit guides, and family members are perpetually in their aura. The only problem with this is that although you might "feel" safer with all those beings in your space, you really no longer have seniority over your own decisions, energy, or inner space in this kind of situation. So what happens is that you are really no longer "you" as a spirit in a body, but "you with a whole ton of virtual roommates," i. Somehow that kind of situation has become romanticized by people and confused with love. Sage is also something you may want to think twice about. Saging your room, or house, basically turns the entire space to white. Then it also tends to bring in American Indian spirits who, most likely, have no karma with you at all. And so they are like, "why the hell are you calling on me? So it is really your preference, but personally I think it is much more effective to sit down and work the energy clairvoyantly. The real problem with "white light" is that people tend to conceptualize or visualize it as a blank piece of paper, or glue –" because that is white –" right? Real white light includes all colors and hence is actually clear. It is the same clear light that is repeatedly referred to in the Tibetan Book of the Dead. Surrounding yourself with clear light is much different from surrounding yourself with milky, creamy, or glue-like white. The other problem with white is that it covers up programming, essentially making a person unconscious to strings of pictures in their space. Professional Intuitive Erika Ginnis keenly explains, "White light, as it is often used, is a very sticky, thick and slow-moving energy. It will certainly protect, because it allows no movement either in or out. Often when people are in fear they will have a lot of white energy in their aura. Or if someone is afraid for them or of them, it will sometimes turn into a white energy. It is very difficult to see through, so your spiritual sight is blocked. So you might ask why anyone would use it and why so many people like it? Well I can think of two possible reasons: In fact, in modern clairvoyant schools gold is one of the colors that is worked with the most habitually. However, surrounding yourself with a color of light is never used as a protective method in these schools. They use other specific and more effective techniques. Go ahead and play around with gold or clear light in your meditations. Now it is interesting that so many spirits tell you to fill up with white. Why do they say that? So that they can be in your space! Because when you are running your own energy you will kick those beings out. There is a big misconception that white can only be pure, holy, "of the light," and good; but in the course of looking at a lot of white energy one will eventually come across very high white vibrations that are incredibly destructive. They will be able to influence, or even control, your decisions and behaviors to varying degrees. Now most people read this article seem to think, "well my intent is going to simply overrule everything this guy is saying."

Chapter 6 : The White Light Myth - Thrive Meditation

White light is the space within the universe that houses positive energies. White light can be called upon by anyone (healers, empaths, the devout, and you too!) for assistance, healing, and protection from negative energies or wonky vibrations.

How do different color filters affect plant growth? Your question is a very good one because plants absorb light at very specific wavelengths to obtain energy. In particular, chlorophyll absorbs blue and red light while allowing green light to be reflected or transmitted. This is why plants appear to be green to us. Would the plants be ok if you used a red or blue filter and blocked out the green and blue or red light? This is a classic question that many grade school science projects have attempted to answer for many many years. Leaves appear green because they reflect green, while absorbing all other colors of light. Think of the rainbow, what colors are there other than green? What we perceive as white light is actually a mix of all the colors in the rainbow. Within the chloroplasts, the molecules that actually do the absorbing are called photopigments. Freckles are examples of pigments in humans. A plant has a mix of different types of photopigments so that it can absorb light at different colors. A plant can have one photopigment devoted to absorbing deep blue, another devoted to absorbing yellow, another for orange, and another for red. When full spectrum light, like sunlight shines on a plant all the photopigments are activated and absorb their "specialty" color. If there is only one color of light shining on a plant, then only a certain group of photopigments are active. Not only will the plant not have enough light to make lots of food, but the plant uses these different color lights to signal all sorts of other internal processes. If, for example, only blue light was shining on the plant, then all the red-light triggered processes would not occur. Eventually the plant may die because of this lack of full spectrum light and certain processes not happening. Eventually you would die. So, plants need full spectrum all the colors of the rainbow light to live productively. This is a question my college students often ask. You know that "white light" like what you get from a bulb is made of different colors, right? If not, prove it to yourself using a prism. A good picture of the light spectrum is available at: [Filters only allow one color or set of colors pass through them.](#) If you use a green filter, what color light goes through? Test it yourself with a filter and light source. We see things as a certain color because when white light shines on an object, some colors wavelengths of light are absorbed. Others bounce back off the surface into our eye. Imagine you are throwing small foam balls at a wall. Some are absorbed into the wall; you never see them. Others bounce back and hit you in the eye. With light, you only see the light that bounces back and "hits you in the eye". If the wall looks blue, which colors wavelengths are bouncing back off the wall? All of the other colors are being absorbed. If a plant is green, what colors are being absorbed? What color is bouncing off? Now imagine that you are throwing little balls of energy at a plant. Only the ones that stick are used by the plant. The energy balls that bounce off do the plant no good. The plant actually gets its energy from light. So which colors of light actually provide energy to the plant? Which color bounces off without providing energy? Now you are ready to answer your own question, which filters will allow a plant to get the least energy and grow the slowest? What color light bounces uselessly off the plant? Among the colors that "stick", which have the highest energy shortest wavelength? Check the site I listed above or look in a physics book or encyclopedia. Which will give more energy for plant growth, low energy light, or high energy light? If you decide to test your hypotheses with colored lightbulbs or plastic wrap, have an adult help you set up your experiment safely. [Click Here](#) to return to the search form.

Chapter 7 : White Light/White Heat - Wikipedia

The color of visible light depends on its wavelength. Light is not visible above and below 400 nm and 700 nm respectively. White light is actually made seven colors - violet, indigo, blue, green, yellow, orange, red. Red has a wavelength of 700 nm and violet has a wavelength of 400 nm.

Chapter 8 : White light | optics | calendrierdelascience.com

Philips energy efficient Watt PAR38 long life flood Philips energy efficient Watt PAR38 long life flood light bulb is ideal for residential use in living rooms offices kitchens as well as your outdoor security fixtures and for commercial use in offices and retail spaces.

Chapter 9 : UCSB Science Line

White light is actually made of all of the colours of the rainbow because it contains all wavelengths, and it is described as polychromatic light. Light from a torch or the Sun is a good example of this.