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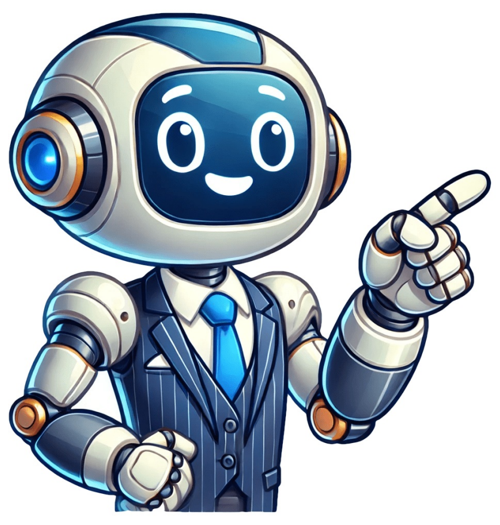

Learning to analyze a photo requires introspection and self-analysis. Whether is a photo you have taken or one taken by another photographer. Image analysis is an essential aspect of the development of any photographer. The photographic analysis leads to a realization of the mistakes that you may be making. This realization in turn leads you to improve your work. But often an individual doesnt have what it takes to be a staunch critique of their own work. It needs special traits. This is why it is best to trust someone who can be honest in their opinions and often be brutal in their visual analysis of your work. Not everyone will analyze the same image the same way. You need either a friend who understands photography in everyday life. Or you need a senior who can play the role of a mentor from time to time. Alternatively, you can also join a photography group or class where you get to interact with other photographers. In this article, we shall be looking at certain aspects which you can inculcate into your photography to improve the visual interest of your images. Image composition is a stressed aspect of photography. Along with light, it constitutes two of the most important factors that make or break an image. You would probably also throw in the scene or the moment that you wish to capture in that mix. But if the composition isnt right the moment will not be captured with anywhere near the same impact. There is a fine line between what works and what doesnt in photography for any intended audience. That fine line is easily breached by the poor placement of various elements. Experienced photographers develop an eye for the moment when everything falls into place in a photograph. This one attribute segregates them from beginners who have to try very hard in order to achieve great photographs. This comes from experience. You need to study the works of masters and practice hard in order to reach that zenith. Learning to analyze a photograph will help you in this respect. Image analysis of compositional aspects is best when objective elements are recognized. Then a photographer can better understand the structure of the photograph they are looking at. Whether a low angle or a high angle is used affects each element because they are seen from a different perspective. Photos that are taken from different angles show objects appearing different. This is more in images taken with wide-angle lenses rather than in close-up photos. Negative space in an image must also be considered when you analyze a photograph. Analyzing composition based only on the objects in an image is incomplete. You must determine the relationship between the negative space and the objects that make up the photograph. Why is it that some compositions work and others dont cut it? Why is it that moving the camera a few feet left or right makes the image more endearing to the eye? And why is it that changing the camera angle sometimes makes clichd subjects make for striking images? The answer is a mix of both aesthetics as well as science. What to photograph and how to photograph it is as relevant a question as any. The time of the day or the equipment that you use is just as important. Use different elements such as light, camera angle, and the concept of exposure. This way you can create a reasonable image out of an impossible situation. Look for straight lines in photographs. Images that contain triangles, squares, and basic other geometric shapes do have an overbearing impact on your photographs. Straight lines are often used as leading lines in the composition. These are often found on the streets. They can also be in landscape horizon lines, on building roofs, and in other places. Lines work to lead a viewer toward the main subject of the image. Even when the subject may seem small and maybe a bit irrelevant, you can use leading lines to help in drawing conclusions about it. This can alter the whole sense of emotion that is created in a photograph. Curved lines can also be used as leading lines in your compositions. Rivers and coastlines drawing attention from the foreground to a figure in the photo can make strong compositions. Triangles are one such shape that tends to make a composition more appealing. Triangles are often considered to be one of the more stable shapes. I am not sure why but when it comes to photography, triangles tend to generate a lot of interest. For example, can you spot the triangles formed by the rays of light in the above picture? The more you can use strong shapes as objects in composition the more a person will enjoy looking at them. They can add meaning and help people interpret the emotion in an image when used well. Many of the painting masters used triangles in their compositions. This is because they understood the meaning they could help convey in an image. To help you better analyze a photograph and how triangles can be made use of, do a search of some related key words of old master paintings. You will see how they work as you are analyzing your subject and positioning it in the frame of your camera. Students of photography can learn a huge amount about composition when they add some historical context. Objects that have a strong shape in a photograph carry more weight. This is especially so when they contrast with the background. An identifiable subject that stands out from a dark background helps a person remain more interested in the subject. For example, an image of nature that contains strong shapes creates a more interesting photograph than one without them. Strong forms like triangles, squares, and circles can create a more interesting narrative in a photograph. Balance and color are also important in photographs. Shapes and forms are two basic factors that governed photography before colors began to the viewer. I used a harsh word, but the fact remains that the real challenge for a photographer is to draw the viewers attention when you cannot use color. Composition, tonal range, and everything else assumes critical importance all of a sudden. The easiest way to incorporate forms in your images is to backlight your subjects. For example, if shooting outdoors, place the subject between you and the light source. Sometimes that will happen without you having to make any serious efforts from your side. The shape can be intriguing in photographs. The form is when the shape all of a sudden takes a three-dimensional perspective. You need to play along with the light, creating subtle shadows that bring the texture forth. The form is essentially about imparting a three-dimensional treatment on a two-dimensional image. This creates an illusion of depth and feeling that can better describe a picture. To analyze the sense of what the photographer is communicating with their image. These aspects of a photograph do not need to be solid. They can be as abstract as you like, so long as they have a sense of belonging in the photo. Look at how the light reflects different parts of a subject you are photographing. Does the thing look the same from every perspective? How does it relate to the background? Is the background light or dark behind the subject? These questions about contrast can help you analyze your photography better. Timing affects the outcome of every photo. No matter if you are making a landscape or photographing lightning. Timing your photo right will make it or break it. There can be a sense of how well-timed a photo is in just a glance. It is one of the first things people look at when they are analyzing a photograph. Making sure that your timing is right helps you have a greater sense of control over what is in your frame. When there is anything moving, you must time it right. But even in a photo where nothing is moving, timing is still important. You can mess up the timing of a static photo when you take it at the wrong time because the lighting is not the best. This is a common mistake people make when they are taking a photo of a sunset. Once the sun has gone below the horizon you need to wait and watch what nature does. The colour changes as time goes by. Nothing else in your frame may change, but the colour in the sky does. How does the light reflect off the clouds? Is it changing? Pictures taken of sunsets are often best when the photographer times them right. When there are moving objects in your photo it is even more vital to make sure that you time the moment right. You dont want to take a photo when the subject is half way out of the frame. It is surprising to me how often people miss this when they are analyzing when to take a photo. Think about the context of what you see in the image and how each element relates to the others in the picture. Describe to yourself what you see in words. Look at the detail and figure out how you can make the composition more interesting. One would argue that to keep in mind all these at the moment of making an exposure is probably asking too much. I say its like learning how to drive a manual transmission car. You not only have to keep an eye on the road but also change gears at the right time. It is daunting at first. Then slowly it becomes muscle memory. You do it without consciously thinking about every detail. The calculations are made on the fly. And when you look at something, you instantly know things like which focal length to use. You will select the right focus point as well. You will also choose the camera angle to be used even before raising the camera to your eye. When you look at a photo you have taken, think about these aspects. Get a sense of the overall photo with this helpful analysis. Frame it in your mind in different ways. Figure out if the message you are trying to communicate is clear. If it is not, how can you take the photo in a different way to make people notice it more? Challenge yourself with every photo you take. Then every photo you take will be better than the last photo. This will point you in the right direction as a student of photography. The message will become clear to you the more your practice. Photography terms are numerous and can be super confusing for new photographers to get their heads around. But having a good understanding of the photography terms used to describe essential processes will help you enjoy photography a lot more. Some of the technical jargon is just that, jargon. Listening to two photographers having a conversation seems like they may be speaking a different language. All the technical terms have little or no meaning outside of photography. Without knowing at least the most essential of these photography terms, you will struggle to learn photography, let alone have an intelligent-sounding conversation about it. Like anything you learn, the more often you practice, the easier it becomes. The more you use the photography terms and jargon, the quicker they will become a natural part of your vocabulary. Every article and course we publish is full of photography terms. Personally, I always aim to remove as much jargon as possible from my writing and teaching. The aim of this is to help new photographers who may not have learned the photography vocabulary yet. I also do this to help people who do not have English as their first language. We hope this photography terms glossary will be a valuable resource for all photographers. Use it to help you better understand the myriads of photography terms, acronyms, and numbers that frequently appear along with anything to do with photography. This photography terms glossary will help you understand and make better use of photography terminology. Add it to your bookmarks now! This is a chip in digital cameras with the function of converting light photons into electrons. The cameras sensor collects photons when you press the shutter release. The A-D converter transforms these into electrical signals used to create a digital image file. Aberration is an optical imperfection that occurs in camera lenses. This happens when light enters the lens and is imperfectly translated to the cameras sensor. There are a variety of types of aberration. The most common is chromatic aberration. Absolute resolution is the full size of the image sensor in a camera. It is conveyed as a dimensional count of the sensor in pixels. For example, a Canon EOS 5D Mark IV has an absolute resolution of 6720 x 4480 pixels. This is also measured in the number of megapixels a sensor contains. In the case of the 5D Mark IV sensor, it has 31.7 megapixels. The actual area of the sensor that an image is formed with and translated to the A-D Converter is often less than the absolute resolution of a sensor. This term is often used in relation to the importation of image files into post-processing software. Image acquisition happens in a variety of ways depending on the software or app being used. The active area of a sensor consists of the pixels that capture photons. This can vary depending on the mode the camera is set to. Even when set to the highest resolution setting, the active area is often less than the Absolute Resolution of a sensor. Many cameras provide options to capture images in a variety of formats. For example, when set to capture a square image, the active area will be a square measurement based on the shortest side of the camera sensor. A color space using RGB primary colors designed to include most colors CMYK printers use. Adobe developed this in 1998 (its sometimes still referred to as Adobe RBG 1998). Using this auto-focus mode a camera will continuously focus while the shutter button is partly depressed. It is most commonly used when photographing moving subjects. Aliasing is the jagged look of low-resolution lines that run diagonally across an image. Anti-aliasing tools are available in some image processing software. Also known as Available Light. Its the light that exists without the photographer having added it. During the day, the sun is always ambient light. Any electric or any other light source not introduced by the photographer is ambient light. Also known as Field of View. This is how much of a scene a camera can photograph. It varies depending on the lens and the size of the cameras sensor. Shorter focal length lenses have a wider angle of view than lenses of longer focal lengths. The aperture of a lens is an adjustable hole used to regulate the amount of light that passed through the lens. Aperture is one of three parts of the exposure triangle that control light reaching the cameras sensor and affecting it to make images. Aperture, shutter speed, and ISO need to be controlled together to manage correct exposures. The aperture has a strong influence on the depth of field. Wider apertures create images with a shallower depth of field. Narrow apertures produce more depth of field in photos. The widest aperture is always included with lens information. For example, 50mm f/1.4, or 18mm-105mm f/3.5-6.3. The aperture measurement is provided as an f-stop number. The size of the opening is indicated by the calculation of the lens focal length and the f-number. So, for example, a 50mm lens at f/2 has an aperture opening of 25mm. Aperture priority is an exposure mode setting on cameras. It is the most popular auto-exposure mode. In aperture priority mode the photographer maintains control over the aperture setting while the camera sets the shutter speed to balance the exposure. How this happens depends on the information the cameras light meter provides. Aperture priority is very popular because it allows people to capture generically well-exposed photographs while maintaining some level of control over the depth of field. The aperture priority setting on the mode dial of a camera is usually labeled A or Av (on Canon cameras). For more information about how to use the aperture priority mode, and other camera exposure modes, please refer to this article. APS stands for Advanced Photo System. The C stands for Classic. This size of an image sensor is a 3:2 ratio, which is the same as a full-frame sensor ratio. APS was a film format introduced for a short period of time in the 1990s before digital cameras were popular. There are two other APS sensor sizes. The exact APS-C size varies depending on the manufacturer of the camera. APS-C sensors are used in most DSLR cameras that do not have full-frame sensors. They are also known as crop sensors, along with various other sensor sizes that are small than full-frame. The crop factor of an APS-C sensor is 1.5x. This is a similar-sized sensor to the APS-C but has a crop factor of 1.3x. It is used in only a few Canon and Leica cameras. Typically this term is used together when talking about an archival print or photograph. This is a photographic image thats made to last a long time. The term can also be applied to film processing which has an emphasis on longevity. Artifacts appear in images as a result of compression or interpolation. Artifacts form and appear in different ways depending on the subject material of a photograph and how the compression is applied. Artifacting can occur in camera and during post-processing with software or apps. ASA stands for American Standards Association, which explains nothing of its meaning in photography or anything else. It is represented by a number that indicates the light sensitivity of the film and sometimes digital image sensors. It has largely now been replaced by the term ISO (another acronym that is equally unhelpful.) Aspect ratio is how wide and how tall an image or sensor is. To find the ratio you divide the width and height by their common factor. 36mm x 24mm is the size of a full-frame sensor. These numbers have a common factor of 12, so you use this number to divide each to come up with the aspect ratio of 3:2. An aspherical lens has aspheric, rather the spheric, surfaces. Their curvature radius varies from the center of the lens to its edge. This type of lens can provide more optical functionality than spherical lenses can. Benefits of aspherical lenses include sharper focusing and larger aperture sizes. They also tend to make auto-focusing in low-light situations easier. Auto exposure bracketing or AEB is a term that is used to signify a process where the camera automatically takes two or more exposures but with different exposure values. This method is generally used when the photographer isnt quite sure what the correct exposure for a scene is. Autofocus is a system thats in most modern cameras. It became more common in the 1980s and since then autofocus systems in cameras continue to become more and more complex. The camera has sensors that measure the distance of a subject from the camera. Tiny electronic motors in the lens and/or camera body then adust the lens optics to bring the subject into focus. There are various options on cameras as to how to set up and use the autofocus system. It can be almost completely automated, so the camera decides what is most important to focus on. Or it can be user-controlled so the sensors will determine the distance of where the photographer chooses. Average metering refers to a mode setting of in-camera exposure meters. Its often given different names by camera manufacturers. In Nikon, average metering is called Matrix metering. In Canon cameras, its known as Evaluative metering. Olympus uses the photography term Digital ESP to name its average metering mode. No matter what its called on your camera, it has the function of taking light readings from multiple parts of the frame, averaging the value, and presenting an overall exposure value. In many cameras, this is the default exposure meter mode. Most cameras have a selection of various metering modes. Auto White Balance is a camera setting that adjusts the image so white looks white and other colors appear realistic. White balance can also be adjusted manually. The white balance controls in a camera exist to remove unrealistic color casts caused by variance in light temperature. Light can be cool and bluish. Warm, with a yellow or orange appearance. Or it can be quite neutral. Set to Auto White Balance your camera filters out any color temperature that causes white elements to appear other than white. In situations where there are lights of varying color temperatures, it may not be possible for the camera to correctly adjust. This can occur indoors where there are different types of electric lighting with bulbs that emit both cool light and warm light. Most of the time Auto White Balance functions acceptably well. With RAW files its easy to adjust the white balance during post-production if it is not to your liking. Back button focus is a technique used to operate a cameras autofocus system using a button on the back of the camera body rather than the shutter release button. By default on most, if not all, cameras, auto-focusing is initiated when the shutter release button is partially depressed. By configuring your camera through the menu system you can set it to only focus when an assigned button, usually on the rear of the camera, is pressed. The auto-focus function of the shutter button can be disabled. This allows you to separate the auto-focus and shutter release functions. Background, as a photography term, refers to the area behind the main subject or foreground of the photograph. Backlighting illuminates a subject from behind. It is sometimes referred to as kicker or rim lighting. Because the light is behind a subject and facing the camera, extra care must be taken when setting the exposure. Backlighting a subject means it is very easy to end up with an underexposed subject when the meter reads directly from the light source. Barrel distortion causes straight lines in photographs to appear as though they are bent. A photo of a grid pattern with barrel distortion looks like the lines bend inwards, giving a barrel-shaped impression. Barrel Distortion is commonly seen in low-quality wide-angle lenses. It is most apparent in photos that contain strong, straight lines in the composition, such as in a lot of architectural photography. Batch scanning refers to the process of scanning multiple images in one session without making adjustments to settings between scans. This can be applied to scanning prints or film. This practice is most effective when there are no significant color, light, or contrast variations in the selected images. One bit of digital information is the smallest unit measurable. Eight bits is equal to one byte. They are the basic building blocks of information used in all computer technology. In digital photography, bit depth is used to indicate the color value in images. For example, an 8-bit image has 256 available colors. Bit stands for binary device. In digital photography, it has a value of either 0 (which is black) or 1 (which is white). The combinations of 1s and 0s determine what color is. A bitmap is a digital image format with the file extension of .bmp. Its sometimes called a raster image, and is not to be confused with a rasta image. A bitmap is literally a map of bits (units of digital information) that form an image when rendered on a digital display, like a phone or computer monitor. Blocked shadows refer to dark areas in a digital image that contains no detail. This is usually because that part of the photo is underexposed and the dynamic range of the cameras sensor is not broad enough to record detail in those places. Lower quality sensors present this problem more so than higher quality ones. Blooming happens in an image when a cameras sensor does not properly manage very bright areas well. It appears as halo-like brightness or color around affected areas. It looks similar to chromatic aberration. A blown-out area in a photograph contains no detail because it is too bright and has been overexposed. As with blocked shadows, blowout occurs more commonly on lower-quality sensors that have a more limited dynamic range. Blue hour happens in the morning and evening when the sun is between about 4 and 8 degrees below the horizon. Its given this name because at these times daylight appears bluish and cool. Blue hour usually lasts less than an hour. How long it lasts depends on the season and proximity to the equator. Further away its more likely to last longer. .bmp is the file extension of bitmap files. Bokeh is the quality of the blur in the out-of-focus parts of a picture. It is a Japanese word meaning blur. In photography, its used not so much about the blur, as it is about the quality of the blur. Lenses render the look of bokeh in particular ways. This can vary with different focal lengths and with lenses of the same focal length produced by different manufacturers. Bracketing is a technique used when a photographer is not sure if the exposure settings they have chosen will produce the best results. First, an exposure is made according to the meter reading. Then two or more further exposures are made of the same composition. Some are underexposed and some are overexposed. This provides a photographer with more choice when they are post-processing their images. The HDR (high dynamic range) technique relies on exposure bracketing and the use of a tripod so each exposure is of precisely the same composition. Many cameras have an auto-bracketing feature where the camera will take multiple exposures at different settings based on the initial exposure. Broad lighting is a portrait lighting technique. With this style of lighting, the subjects face is not facing the camera but turned to one side. The key light illuminates the side of the face the camera can see more of or the broad side of the subjects face. It is not considered to be particularly flattering because it can make a persons face look wider. Buffer memory is RAM in a camera that holds image files as they are being transferred to removable memory cards or other storage devices. The Buffer memory varies in size from camera to camera. Once the buffer is full, the camera will no longer be able to take more photos until the information contained in the buffer is transferred. This typically happens when using burst mode to take many photos in a short period of time. The bulb mode is a shutter speed setting that is unlimited. Its generally used for making exposure of a longer duration than the camera has a controlled shutter speed setting for. Its most commonly used at night and in other situations where there is very little ambient light. Burst mode is a camera setting that allows for the shutter to open and close taking consecutive photographs as long as the shutter button is depressed. Many cameras have two burst modes, low-speed and high-speed. Burst mode is also called continuous mode. Speeds vary from camera to camera. This mode is helpful when photographing action. The burst rate is how many images a camera can record before the buffer is full. This varies within a camera depending on the type of file being recorded. The burst rate for .jpg files will be higher than for RAW files because jpegs are much smaller and transfer out of the buffer to the storage card more quickly. Butterfly lighting is a technique where the key light is placed above the subject and directly in front of them a little. The shadow formed under a persons nose when photographed with this style of lighting is said to represent the shape of a butterfly, hence the name. It is a flattering form of lighting that is sometimes also called Paramount lighting because it was used extensively when photographing movie stars. Camera Body The camera body is the main part of the camera, not including the lens or other accessories. Camera modes control various aspects of the camera. Modes are most commonly associated with exposure. There are also modes for focus and metering. Some modes allow you to use your camera automatically like you might use your phone to take photos. Other modes allow for some or total manual control of the camera. The camera sensor, or image sensor, captures light to make an image. It does this by converting light waves into electrical signals. The quality of camera sensors varies greatly. Quality is closely related to the size of the sensor. A physically larger sensor produces higher quality digital images than very small sensors found in phones and compact cameras. Sensors are measured by dimension and by pixels. This is usually expressed in terms of megapixels, or how many millions of pixels a sensor has. Sensors with larger dimensions have larger pixels than smaller dimensioned sensors with the same number of pixels. The two main types of image sensors used in digital cameras are CMIOS (Complementary Metal-Oxid Semiconductor) and CCD (Charge-Coupled Device). Digital cameras are often divided into two categories based on their sensors: Full frame or crop sensors. Camera shake is the term used to describe the blur that occurs when a slow shutter speed is used and the camera is moved during the exposure. This results in the whole image being blurred. The type of blur this creates looks different than blur caused by a moving subject or areas of a photograph that are not in focus. Choosing a suitable shutter speed and holding your camera correctly helps to avoid camera shake. Candid photography is pictures of life as it happens with no interaction with the photographer, other than that they are there with their camera. In candid photos of people, they are unaware that they are being photographed. This style of photography is often practiced by photographers who are too shy to interact with their subjects. An electronic device is used to transfer photos from memory cards to another device, typically a computer or tablet. A CCD is one of two main types of camera sensors. These consist of an integrated circuit formed on a silicon surface and form light-sensitive elements called pixels. Chimping is a derogatory term used to describe what most photographers do after taking a photo. They review the photograph they have just taken. The term comes from the supposed sounds made as the photographer reviews their photos. Apparently, some sound like chimpanzees. Chromatic aberration is a visual defect in photos caused by light wavelengths not focusing correctly as they reach the image sensor. It mainly occurs in areas of high contrast in images and produces a purple colored fringe. Its often also called purple fringing or color fringing. This occurs more frequently towards the edges of images and is more prevalent in older and cheaper lenses. CMOS sensors are one of the two primary types of imaging sensors found in digital cameras. Its purpose is to convert photons into electrical signals for digital image processing. This is the color mode used in commercial, off-set printing. It is an alternative set of colors than used with digital photography displayed in cameras or other electronic devices. The colors are:Cyan (C) Magenta (M) Yellow (Y) Black (K) The K is for the key. In the printing process, the plate for black is the key plate and is used as a base to align the plates for other colors. These colors are known as subtractive colors. When these colors are added to white, as in the printing process, other colors are removed from the visual spectrum. This is the process of matching the colors seen on digital devices so no matter what you view an image on it will always appear to have the same colors. It requires a color base standard, like Adobe RGB or sRGB, to be chosen and each device to be adjusted to all colors appear the same. The lack of calibration across devices is why colors might look great on one monitor and terrible on another. Color depth is also known as bit depth. Its used to indicate the number of bits that make up colors in digital images or in individual pixels. A color management system coordinates and controls the color spaces in digital imaging devices. A Color Palette is the variety of colors available on a device or in software that can be rendered on a display. Each color palette is dependent on the color depth of a digital image. The greater the depth, the broaden the range of the color pallet. This is a specific range of colors. The most commonly used in digital photography are sRGB, Adobe RGB, and ProPhoto RGB. Color temperature is basically the color of light and how different colors appear. The Color temperature is measured using the Kelvin scale. Its typically referred to as neutral, cool, or warm. A type of solid state memory storage used in digital cameras. A composite, or composite image, is made up of more than one photograph. Composition in photography is basically what a photographer chooses to include in the frame when they take a photo. How each element in the frame is positioned in relation to one another determines whether or not the composition is good or bad. There are many different rules of composition used in photography that have been derived from or directly copied from painters. These can be contentious as, like with many other aspects of photography, what is determined as good or bad are up to personal taste. Compression can refer to two different aspects of photography. Lens compression and image compression. Lens compression creates the appearance that elements that are at different distances from the camera appear closer together than they are. This happens when using a telephoto lens. Image compression happens when an image is saved in a lossy format, such as .jpg. The file is compressed as it is saved and a certain amount of the data is discarded, resulting in smaller file sizes. This is an autofocus mode in cameras. In this more, so long as the focus button is pressed, the cameras autofocus system will continuously refocus if the subject or the camera move. Different camera manufacturers call continuous focus by a variety of names. Canon cameras call it AI Servo. In Nikon and Sony cameras its called AF-C. Olympus calls it C-AF. The contrast in photography is basically the scale of difference between the brightest and the darkest parts of an image. Copyright of a photograph belongs to the photographer who created the image. This means that you own the image and it cannot be reproduced or have derivative works made without your express permission. It does not require any special permission, paperwork, or registration under US copyright law. This may differ in other countries. Crop Factor refers to the size of a camera sensor that is smaller than a full-frame sensor. A full-frame sensor is 36mm x 24mm, the same size as one frame of 35mm film. It is important in photography because of how the field of view of any given focal length lens renders depending on the sensor size, or crop factor. The depth of field in a photograph is a measurement of how much of the image is in acceptably sharp focus. This is affected by a number of factors that a photographer has control over. Aperture is a key element in controlling the depth of field in a photograph. The wider the aperture used, the shallower the depth of field is. Distance between the camera and subject and the subject and background also affects depth of field. Diffraction of light happens when it passes through a narrow aperture opening. Smaller apertures are associated with having more of a photo in focus. Diffraction can be a problem with narrower aperture settings causing blurring. DAM refers to a photographers digital workflow. Its the process of importing, cataloging, arranging, deleting, and exporting digital images. DNG is an image format developed by Adobe and publicly available. Digital zoom is an in-camera function where the central portion of an image is cropped into. This has the effect of making the middle look larger, similar to using a zoom lens, (which produces an optical zoom.) With a digital zoom, the image resolution is lowered and quality suffers. Zooming with telephoto lenses does not produce the same quality loss in a photo. Distortion in photography is where an image is altered from how the subject originally appeared. This problem is often related to lens distortion, but can also occur through high ISO use and poor post-processing of digital images. In very hot climates, heat distortion can also be a problem in photographs. Printed photographs are often measured using the number of dots per inch a printer produces to render an image. Dots per inch (DPI) is commonly used to indicate image quality or resolution in digital photography. A DSLR camera is a digital camera with a single lens that uses a mirror to reflect light via a prism to the viewfinder. When the shutter release is pressed to take a photo, the mirror moves to allow light to pass through the shutter as it opens, creating an image with the sensor. A DSLR camera has an optical viewfinder that allows the user to view directly through the camera lens. Dye sublimation is a form of digital printing that can produce high-quality, durable prints relatively inexpensively. Dynamic range is the ratio between the lightest and darkest tones captured by a camera in a single exposure. Higher-quality digital image sensors produce a wider dynamic range. This is a set of two numbers on a printed image notifying the number of the print in a series and how many prints are in the series. Effective pixels are how many pixels on a cameras sensor are actually used to make a digital image. This is the same as the Active Area of a camera sensor. All sensors include additional pixels that are used as a reference point for black and not included in the image area. An electronic viewfinder displays a digital rendering of what the cameras lens is pointing at. This type of viewfinder is used in mirrorless cameras. EXIF data is generated by digital cameras and software to add information about how a photo was made to the image file. It contains data about the camera, lens, settings, date, etc. Exposure is the amount of light a camera sensor captures when the shutter release button is pressed. The amount of light is controlled by the size of the aperture in the lens and how long the shutter is open for. The responsiveness of the sensor also has an influence on the exposure appearance. ISO controls this. If too much light affects the sensor the image will be overexposed and appear very bright. When not enough light affects the sensor the image will be dark and underexposed. An exposure meter, or light meter, is a device used to measure the amount of light before taking a photograph. All modern cameras have built-in light meters that measure reflected light. When a camera is set to any auto-exposure mode the light meter will read the light when the shutter button is partially depressed. The camera will then adjust the exposure settings so the correct amount of light will enter the camera, according to the cameras pre-programmed algorithms. When using a camera in manual mode, a photographer must read the information provided by a graphic display the light meter displays in the viewfinder or on the monitor. The exposure controls must then be adjusted manually according to how the photographer interprets the information the light meter provides. Hand-held exposure meters can also be used to measure the amount of light. These provide the added option of being able to read incident light. The exposure triangle is the relationship and function between the aperture, shutter speed, and ISO. These three controls are adjusted to allow the right amount of light to enter the camera and affect the sensor. Exposure value compensation is the measurement of an amount of exposure variance that can be dialed into a camera to increase or decrease the exposure. It is commonly used in automatic and semiautomatic camera modes to override the cameras choice of exposure. In photography terms, exporting an image is what happens to it once it has been edited and is then saved in a different file format than its original state. Sometimes the term is used for simply saving an image also. F-Stop is the photography term used to describe the measurement of the aperture opening in camera lenses. The f-stop number is preceded by f/. F represents the lens focal length. The number following it is divided by the focal length to provide the size of the aperture opening. Fast glass is a slang term for lenses that have a wide maximum aperture that can allow for the use of a faster shutter speed. Field of view is how much is visible and can be captured on the camera sensor or film. The relationship between the focal length of a lens and the size of the cameras sensor affects the field of view. File format in photography terms refers to the type of image file. These include many RAW file formats, TIFF, jpeg, PSD, PNG, and many other formats. A fill light is any other light used when taking a photo other than the key, or main, light. It can be ambient light or an introduced light source such as a flash or LED. It can be used to soften hard shadows in dramatic lighting setups and help create more of a three-dimensional appearance to the depth of a photograph. A filter in photography is a high-quality optical glass or resin device placed between the light source and the sensor (or film). Most commonly they are attached to the front of camera lenses. Alternatively, they can be inserted into special slots in some lenses and other types can be placed immediately in front of a light source. Filters have the function of altering the path of light waves entering the lens for a large variety of purposes. Most commonly, lens filters such as UV and Skylight varieties can help protect the front element of a lens from becoming damaged. A filter is much easier to remove and replace than the front element of a lens. They are also a lot cheaper. Firmware is software in a camera that enables the functionality of the hardware. Flash sync describes the properties of how a camera and flash work together. Its also the port where you would plug an external flash cable into a camera. To use a flash it must synchronize with the shutter opening. If the flash is not synced or poorly synced it will result in photos that are underexposed or partially obscured by one of the shutter blinds. Many cameras allow you to sync the flash with the opening or the closing of the shutter. This produces a different type of photo, depending on the shutter speed used and any movement. Flat light is soft and dull and produces little or no shadows in a photograph. Because of this, theres often very little sense of depth in photos with flat light. Slightly before sunrise and a little after sunset natural light is considered to be flat. Focal length is one of the basic descriptions of a camera lens. The focal length is represented in millimeters. The widest aperture is also part of the description of a lens. The focal length of a lens is the distance between the point where light converges in the lens and the camera sensor or film. In practical terms, the focal length of a lens indicates how much you can see through the lens. The lower the focal length number, the wider the field of view is. Zoom lenses are labeled with two focal length numbers indicating the widest and longest extremes the zoom range has. The description of the angle of view of a lens on a crop sensor camera in relation to the same focal length being used on a full-frame camera body. Focus in photography terms is the point at which a photograph is the sharpest. This happens when the camera lens is adjusted correctly on the point at which the photographer has decided is most relevant. Focus stacking is done by combining two or more photographs of the same composition where the focus point in each image is slightly different. The effect is to generate a composite image that has more depth of field than could be captured in a single exposure. Frames per second or FPS refers to the number of times the shutter on a camera can open and close in one second. Its used most commonly to describe how many exposures can be made by a camera when using the burst mode setting. Freelensing is a method of making images with the camera lens not attached to the camera. See Chromatic aberration. A full-frame sensor is the photography term used to describe the physical dimensions of a camera sensor that measures 36mm x 24mm. This is the same size as a single frame of 35mm film. It is relevant when discussing the focal length of camera lenses and their field of view. A gamma curve is a tool in digital imaging software that allows the user to adjust (or correct) the brightness of an image during the editing process. A GIF is an image file format. GIF stands for Graphical Interchange Format. The golden hour is a term used by photographers to describe the times of day a little after sunrise and shortly before sunset. At these times sunlight takes on a warm tone because it is low in the sky and must pass through more of the earths atmosphere before we see it. Many photographers prefer taking photographs outdoors during the golden hour. The length of time varies depending on the season and your location on planet earth. Grain is the appearance of small particles seen in film and photographs produced from film. It is the light sensitive silver halides that metamorphose into metallic silver when exposed film is developed. It is a common misconception that noise caused by camera settings using a high ISO is the same as grain. Each type of film produces different looking grain structures. Hard light casts shadows with a clearly defined edge. This light is created by a light source thats relatively small compared to the subject. Think of the sun on a cloudless day or a camera flash with no modifier and the type of shadows you see with these types of light. Hardware calibration as a photography term refers to using an accessory to manage and adjust a computer monitor so the colors it displays will look the same on screen as when they are printed. HDR photographs contain a very wide range of tones, from the brightest to the darkest areas. They are typically produced by making multiple bracketed exposure of the same scene. These exposures are then combined in-camera or in editing software. As camera sensors have become more advanced, the HDR technique of combining multiple exposures has become somewhat redundant except for when photographing scenes containing extreme contrast. A histogram is a graphic representation of the tone values in a photograph. The left side of the graph displays dark tones and the right shows bright tones. The histogram is divided into 256 different values. The height of each part of the graph shows how much or how many pixels are displaying that value of light. Part of the camera where a flash or other accessory can be mounted. When a dedicated flash or wireless transmitter is mounted on a cameras hot shoe, the flash and camera will communicate so when a photo is taken the correct amount of light will emanate from the flash. Hyperfocal distance is a method of calculating how to achieve the maximum depth of field you can obtain in a photograph. It is the measurement of how far from the camera to a point in a scene being photographed where everything from half of that distance to infinity is acceptably sharp. An ICC profile is a set of data determining how digital imaging devices manage color to a specific standard. This term is used in relation to the importation of image files into post-processing software. It happens in a variety of ways depending on the software or app being used. Image blending is the process of combining two or more images during post-production. This is often done to make HDR or focus stacked images. Image quality as a photography term typically refers to the overall technical characteristics of a photograph. Cameras, lenses, and photographers can all impact image quality. Image stabilization is also known as vibration reduction (VR) and Anti-Shake (AS). This is a technology used in some camera bodies and some lenses to help reduce the effect of blurring caused while exposure is being made. It is a photography accessory used to measure light. It is a handheld device that has different functionality than light meters built into cameras. It measures how much light is illuminating a scene, rather than how much light is reflecting off a subject, (which is how in-camera exposure metering works.) A type of printing method commonly used in consumer computer printers that can be used to print photographs. A high-quality LCD type monitor that is known for producing accurate color rendering. ISO is used to measure the responsiveness of a camera sensor or film to light. This is expressed as a number. The lower the number, the less sensitive the sensor or film is. So, when the light is very bright, a low ISO setting can be used. The higher the ISO setting used, the greater the incidence of digital noise. This depends on the quality of the image sensor. This term refers to the zigzag appearance curved lines take on in low quality digital images. A JPEG (or .jpg) is a commonly used image file format. This format is lossy which means that as an image is saved some of the data that make up the photograph is discarded. If a JPEG photo is compressed too much, the loss of quality is visible. The more a JPEG image is compressed, the small the file size is. Kelvin, or the Kelvin scale, is used to measure color temperature. This is closely tied to the white balance function in digital photography. The key light is the main light illuminating a photograph. It can be natural or artificial. A Kilobyte is an amount of digital data (1,024 bytes) that is commonly used to measure digital image files. LAB is a color space that is not in common use. RGB and CMYK are the standard color spaces when editing and printing out digital images. This is the delay between pressing the shutter button and the shutter opening in a camera. This is only noticeable using a cheap camera. Lag time is also known as shutter lag. Lens flare happens when you point your camera in the direction of bright light. This causes the light to scatter inside the lens and cause haze and/or colored light shapes on photographs. This effect is rather random and can be used creatively or completely avoided. A light meter or exposure meter is a device used to measure the amount of light before taking a photograph. All modern cameras have built-in light meters that measure reflected light. When a camera is set to any auto-exposure mode the light meter will read the light when the shutter button is partially depressed. The camera will then adjust the exposure settings so the correct amount of light will enter the camera, according to the cameras pre-programmed algorithms. When using a camera in manual mode, a photographer must read the information provided by a graphic display the light meter displays in the viewfinder or on the monitor. The exposure controls must then be adjusted manually according to how the photographer interprets the information the light meter provides. Hand-held exposure meters can also be used to measure the amount of light. These provide the added option of being able to read incident light. A lighting pattern is what some photographers call standardized ways studio lights can be set up to achieve a certain lighting look in a photograph. Rembrandt lighting is a popular lighting pattern used in portraiture. Lighting ratio is the comparative brightness of any light sources lighting a subject in relation to each other. Lightroom is a popular image editing software package produced by Adode for manipulating and cataloging digital images. Images can be manually edited or you can apply presets to obtain a certain look to an image. A type of battery commonly used in cameras. A long exposure is also known as a slow shutter speed. Using this technique the photographer leaves the camera shutter open for long periods of time. The amount of time can be controlled by the camera, or manually when the camera is set to Bulb mode. Loop lighting is a technique used by portrait photographers. With this lighting pattern, the key light is placed slightly above the subject and at about a 45-degree angle. This casts a loop shape in the shadow cast by the subjects nose. Lossy in photography terms refers to image file types where the image is compressed and data is discarded as the file is saved. JPEG is the most commonly used lossy image file format. Lossless image file formats retain all the image data when they are saved or exported. These can also be referred to as non-lossy formats. A low pass filter is used to help reduce the moir effect in photographs. This is a phenomenon that happens in digital photography when theres something with closely spaced repeating lines or patterns in the scene being photographed. The low pass filter, or anti-aliasing filter, manages the frequency of light affecting the sensor. It allows lower frequencies to pass through while blocking higher frequencies. Luminosity refers to the brightness of a light or the light value in parts of a digital image at a certain wavelength. Basically put, luminosity is the brightness of an image. A macro lens is one that has a very short minimum focusing distance. These are used to take photos of very small objects and render them in a ratio of at least 1:1. Macro lenses can also be used to photograph subjects that are not so close. For more information, read this article about camera lenses. Manual mode is the M setting on a camera that gives the photographer the most control over the cameras exposure settings. The settings for aperture and shutter speed must be set manually, along with the ISO, to obtain the desired exposure. Matrix metering is the term Nikon uses for the averaged metering mode in their cameras. A megabyte is an amount of digital data (1,024 kilobytes) that is commonly used to measure digital image files. A megapixel is the standard measure of the size of a digital camera sensor. One megapixel is one million pixels. A memory card is a flash memory storage device commonly used in digital cameras. This is the information about a digital photograph. As a photo is being taken the camera writes some of this information and attaches it to the image file. It typically contains information about the camera settings, model, lens, etc. The set of data can be added to and edited during post-processing. Metering in photography terms is the practice of taking an exposure meter reading before taking a photograph. A redundant form of memory storage used with early digital cameras. Micro Four Thirds refers to the size of sensors and the camera system using this size of the sensor. It is a format popularly used in mirrorless cameras. The size of the sensor measures 18mm x 13.5mm. A micro lens is similar to a macro lens in that it is designed to be able to closely focus on a subject. The difference is that a mico lens has a magnification ratio of at least 20:1. This photography term is also sometimes used to refer to certain aspects of image sensors. A mirrorless camera has no internal mirror to reflect light as does a DSLR camera. Mirrorless cameras are generally lighter and smaller than DSLR cameras because they do not contain a mirror or the pentaprism needed to flip an image so it appears the right way up in the viewfinder. Viewfinders on mirrorless cameras show a digital image of what the camera sensor is rendering. Many mirrorless cameras have interchangeable lenses, some do not. Moir is a pattern of distortion that sometimes appears in digital images of subjects that contain closely spaced patterns or lines. Mount as a photography term can refer to how a print adheres or how a lens is attached to a camera. ND filters block a certain amount of light from entering the lens. They are measured in stops and come in a variety of densities. On graduated ND filters, part of the filter reduces the amount of light, and part of the filter is clear. These are popular with landscape photographers for reducing the brightness of the sky in landscape photos. Digital noise in photographs consists of miscolored pixels or pixels of incorrect luminance values in images produced using high ISO settings. It is most noticeable in underexposed and shadow areas in photographs. Noise reduction is an in-camera function and an external one in photo editing software. It is used to reduce the amount of digital noise in photos and can sometimes cause an image to appear soft when aggressively applied. Non-lossy, or lossless, are terms used for image file formats that retain all the image data when they are saved or exported. The type of technology used in some camera monitors. Optical Resolution refers to the resolution of a camera or digital scanner. Resolution is measured in megapixels and often expressed as part of the common camera information, such as a 38 megapixel, or 24.2 megapixel camera. An optical zoom is more commonly called a zoom lens. This provides a photographer with the ability to manipulate the focal length of the lens to include more or less in their compositions without physically changing their location. Some cheaper models of cameras have digital zoom functionality. This is what happens when too much light enters the camera and affects the sensor. The result is a very light photograph. Overexposure is avoided by learning how to meter the light and adjust the exposure triangle settings to gain a correct exposure. Panning is a technique photographers use to photograph moving subjects so they capture sharp, or sharpish, photographs while using a slow shutter speed. Parallax in digital photography is the difference between what the camera sees and the image that is recorded by the sensor. Most good cameras are designed to avoid parallax errors from occurring. The system used in cameras to connect an external flash unit. This is standardized across camera manufacturers. Photo stitching is the process of joining two or more photographs of the same scene taken with the intention of forming one image from multiple photographs. Photoshop is a popular digital image editing program created by Adobe. PICT is a little-used lossy digital image file format. Pincushion Distortion happens in cheaper cameras and has the appearance of lines in a photograph bending inwards towards the center of a photograph. This is usually on photos taken with a wider angle lens. A pixel is the smallest part that makes up a digital sensor or digital image. Pixelization happens to an image when it is enlarged to over 100% of its original size. This has the appearance of higher contrast between pixels and causes the image to look blotchy and soft. PNG is an image file format that supports transparency. This format is lossy and was specifically developed for use on the internet. Point and shoot cameras are also known as compact cameras. They are small, easy to use, and usually have a built-in zoom lens. This is a common type of photographic filter that has the effect of being able to enhance or diminish reflections. It can also boost vibrance and contrast in images. This filter requires the photographer to rotate it once its mounted to achieve the desired effect. Post-Processing Post-processing is the manipulation of digital images using a computer program or app. A skilled editor can enhance many aspects of a photograph during post-processing, especially when working with RAW files. A prime lens is one that has a fixed focal length and does not zoom. Prime lenses generally have wider maximum aperture settings than zoom lenses. Provenance is a term used to describe how proof of ownership is established with a photograph or other artwork. A RAW image file is one that contains all the data a camera or scanner captures when an exposure is made. This is a lossless image format. Each camera manufacturer gives its own file name extension to RAW images. This is a camera setting that synchronizes the flash to fire immediately before the second shutter curtain closes during an exposure. Using this technique with a slow shutter speed it is possible to create a heightened sense of motion with moving subjects. This blur looks different than when the camera syncs so the flash fires immediately after the first shutter curtain opens. Red-Eye is the photography term used to describe the appearance of red in a persons eyes when a photo is taken using direct flash. This is most common in situations where the light is very low and peoples pupils are naturally dilated. Red-Eye Reduction is flash technology designed to reduce the instance of red-eye in photographs. Any accessory used by a photographer to bounce more light into areas of their composition. A light reflector can be as simple as a sheet of paper or it can be a purpose-designed tool with many surface options. A reflex camera has a mirror to reflect light entering the lens so the photographer can see an image in the viewfinder. Remote capture is the process of taking a photo when the photographer is not holding the camera or close to it. It involves the use of a cable release, remote control, mobile phone app, or another device to trigger the shutter release. The use of remote flash triggers make it possible to synchronize the flash to fire when it is not mounted on the camera. Some camera systems incorporate remote flash triggering, other systems require the use of external accessories. Resolution as a photographer term refers to the amount of detail in an image. It is used for measuring monitors, digital photo sensors, and just about anything youd put on a monitor or photosensor such as web pages, photographs, and windows.It is typically measured in pixels per inch (PPI) or dots per inch (DPI). RGB is a common color space used in digital displays. It is known as additive color space and differs from CMYK which is a subtractive color space. The rim light is behind the main subject and has the effect of adding a halo-like light to the edges of the subject. It is also sometimes called backlighting. The rule of thirds is a composition technique. It divides the frame into a grid with two equally spaced horizontal lines and two equally-spaced vertical lines. The method is to align the subject or main elements of your image on the 4 intersecting points, or along the vertical or horizontal lines. As a photography term refers to the depth of colors in a photograph. Saturation can be controlled during post-processing. Scene modes are generally found in lower-end cameras. These are pre-programmed exposure modes designed for specific situations. They can include modes such as Portrait, Landscape, Night/Low Light, etc. An SD card is a common type of flash memory used in many cameras. The sensor size is the physical dimensions of a camera sensor, usually measured in millimeters. This is different from the megapixel count of a sensor which can also be used to describe its size and resolution. The sharpness of a digital image is about its clarity. The quality of camera lenses and sensors affects the sharpness of images. The ability of the photographer to focus well and use an appropriate shutter speed also affects the sharpness of an image. Short lighting is a photography term used to describe a style of portrait lighting. This light affects the side of the subjects face that is facing away from the camera. The result is that the aspect of the subjects face closest to the camera is darker. The shutter in a camera blocks light from reaching the sensor or film. When the shutter release is pressed the shutter opens and then closes again. The duration the shutter remains open is controlled by the camera using a set timer in most instances. The photographer can also set the shutter to remain open as long as they want it to. The shutter typically consists of two blinds or curtains. When the shutter release is pressed, the first curtain opens. The second shutter curtain closes to complete the exposure. This is the delay between pressing the shutter button and the shutter opening in a camera. Shutter lag is only noticeable using a cheap camera. This is also known as lag time. Shutter priority mode is a semi-automatic camera exposure mode that allows the photographer to choose the shutter speed. The camera then sets the aperture so a correct exposure can be produced when the shutter is released. The shutter release is the button on the camera, usually controlled by the right-hand forefinger, that controls when the shutter is opened to make a photograph. The shutter on many cameras can also be released by a cable, remote control, or app. The shutter speed is the duration of time the shutter on a camera remains open when the shutter release is activated. A slow flash sync is a combination of using a flash with a slow shutter speed setting. This can allow for more ambient light to affect the exposure and create some blurring of any movement that happens while the shutter is open. An SLR camera uses a mirror and prism to direct and orientate light so an image can be seen in the cameras viewfinder. Digital SLR cameras are called DSLR cameras. A snoot is a lighting accessory that constricts the spread of light. A softbox is a lighting accessory that softens and diffuses light. Softboxes come in a variety of shapes and sizes. The larger the box, the softer the light will be. Soft focus is a photography technique sometimes produced with the use of a soft-focus filter. This technique reduces contrast in an image. And, as the name suggests, it renders the image so that is it blurred, rather than sharp. Soft light is a photography term used to describe the light that casts shadows with indefinite edges, or soft edges. This type of light is indirect and diffused, such as the sun is on a cloudy day. A speedlight is a portable camera accessory also known as a flash. This provides an additional light source the photographer is able to control. Split light is a term used for portrait lighting that illuminates half of a subjects face and leaves the other half in shadow. Spot Metering is a standard exposure metering mode on many cameras. Using this mode it is possible to take a light reading from a very small area of composition. sRGB is a color space or color profile, that is based on RGB. It is similar to Adobe RGB. A standard lens is one with a focal length that provides a field of view that is similar to what we see with our eyes but not including our peripheral vision. Stop is a photography term used to describe the measure of aperture, shutter speed, and ISO. An increment of one-stop either halves or doubles the amount of light affecting an exposure. Stopping down is a term used to describe the decreasing of the size of the aperture in a camera lens. Changing the f-stop number from a lower number to a higher one and thus reducing the amount of light passing through the lens. A strobe light is one that produces a very bright burst of light when triggered. These are commonly used in photography studios. Good quality strobe lights have controls to regulate the output of the light. There are also many accessories such as snoots, umbrellas, and softboxes that are used with strobe lights. Subtractive lighting is the blocking of light affecting a composition. When theres too much light, especially hard light, accessories can be placed between the light and the subject so less light is falling on the subject. A superzoom is a zoom lens with a very diverse focal length range, from very wide-angle to extreme telephoto. The sync speed on a camera is the fastest shutter speed that can be used with a flash. This varies from camera to camera. When the shutter speed is set to a faster speed than the sync speed the shutter may not release or the camera may automatically reduce the shutter speed to the sync speed. A teleconverter is an accessory that mounts to the camera body and the lens is then attached to it. The function of a teleconverter is to increase the effective focal length of the lens. Telephoto lenses have a focal length of more than 100mm. This style of lens has the effect of making the subject in a photo look larger. Distance has the appearance of being compressed in photos taken with telephoto lenses. The longer the focal length is the more compression occurs. TTL metering measures light as it passes through the camera lens and affects the sensor. This is part of the built-in exposure metering system in cameras and generally provides a more accurate light reading than a handheld exposure meter. A thumbnail image is a small-sized, often low resolution, digital photo used as a reference. TIFF stands for tag image file format. This is a lossless file format that is commonly used in digital photography using the .tif file name extension. A tilt-shift lens is a specialist type of camera lens that can be adjusted to manipulate perspective. This type of lens is commonly used by architectural photographers as it allows for the correction of perspective distortions that can occur when using wide angle lenses. Time exposure is also known as a slow shutter speed or long exposure. Using this technique the photographer leaves the camera shutter open for long periods of time. The amount of time can be controlled by the camera, or manually when the camera is set to Bulb mode. Time lapse photography captures a sequence of images taken over a period of time. These photos are then used to create a video giving the appearance of time moving faster than normal. The tonal range of an image is the measure from the darkest to the lightest areas and all the tone values represented in between. Tonality in photography terms is similar to tone range. It refers to the appearance of tones in a photograph. Tone refers to the levels of brightness in a photograph. Toning in photography is a technique used to add or alter the color in a monochromatic photograph. In the past sepia toning was popular, being used to add a light brown tone to black and white pictures. A tripod is a photography accessory with three legs used to mount a camera on. Mounting a camera on a tripod is accomplished with a standard sized threaded hole in the base of the camera. Using a tripod allows a photographer to use much slower shutter speeds than can be achieved effectively when hand-holding the camera. Tungsten light is an older style of electric lighting that produces a warm color temperature of about 3200 Kelvin. A twin lens relex camera has two lenses, usually configured with one above the other. Behind the top lens is a mirror that reflects the light onto a ground glass screen in the top of the camera so the photographer can see an image. Ultra-low Dispersion glass is used in camera lenses and was developed to help overcome chromatic aberrations. Ultrasonic Motors are used to focus auto-focus lenses. These are tiny motors built into higher-end camera lenses. Underexposure is what happens to a photograph when insufficient light affects the sensor or film. The result is that the photo looks too dark because the sensor or film has not been exposed to enough light to make a correct exposure. An unsharp mask is used during image post-processing and has the effect of emphasizing texture and detail where there are contrasting edges in an image. The name suggests that it will make an image less sharp. Many people believe that will make an out-of-focus image become more sharp. Generally, effects of using an unsharp mask have minimal effect on correcting an out of focus photograph. Used aggressively an unsharp mask will create very unnatural results in a photograph. A UV filter reduces the ultraviolet rays entering the lens and affecting the photograph. These filters also help protect the front lens element from being damaged. They are sometimes known as haze filters. Vibrance is a control used in image post-processing software to control the level of intensity of some colors. Vibration Reduction is also known as image stabilization (IS) and Anti-Shake (AS). This is a technology used in some camera bodies and some lenses to help reduce the effect of blurring caused while an exposure is being made. The viewfinder is the part of a camera that you look through. It can be optical or electronic. Mirrorless cameras use electronic viewfinders and reflex cameras have optical viewfinders. This is the effect of darkening or lightening the edges of an image with the aim of emphasizing the main subject. Visualization, or pre-Visualization, is the practice of imagining how a photo will look before its taken. A watermark is a visual reference placed on a digital image or print by a photographer to help protect the image from being copied illegally. White Balance is the process of correcting the color balance in a digital photograph. It can be controlled in camera or during post-processing of RAW files. It is the correction of light temperature by adding a filter so white appears white and colors in the image look natural. A wide angle lens generally has a field of view of 50 degrees or wider. This can be either as part of the focal length of a zoom lens or a prime lens. These are often preferred by landscape photographers. xD Cards are a type of flash memory storage device used in modern digital cameras. The Zone System provides photographers with a scientific method to evaluate the tone range in a composition. It also guides the photographer to adjust the cameras exposure settings to capture an image the way the photographer imagines it. American photographers Ansel Adams and Fred Archer developed the Zone System. They came up with it to help them be more scientific and precise about black and white sheet film exposure and processing. This was long before the invention of digital photography. It was also a long time before the addition of auto and semi-auto modes to cameras. Back when photographers had no option but to carefully consider the light and how to best control their exposure settings. A zoom lens is one that has a variable focal length. This allows a photographer to capture a wider or narrower field of view of what they are photographing. These lenses constrain arrays of glass elements to produce high-quality images. Optical zoom is achieved by using a zoom lens. Digital zoom is achieved by enlarging a portion of an image and producing lower quality results than using a zoom lens. The zoom ratio is the ratio between the shortest focal length and the maximum focal length of a zoom lens. This measurement is commonly used in labeling on compact cameras with fixed lenses and indicated by 5X, 10X, etc. A Post By: Darlene Hildebrandt Are you overwhelmed or confused by photography terminology? Do you want to speak photographer like the pros? Thats what this article is all about. Ill go over some of the most common technical photography terms as well as some less common slang and photographer jargon. By the end, I promise you will have a better grasp of the language. Youll even be able to have a conversation with a seasoned pro and hold your own! Lets get started. These are the photography terms youll find in your cameras manual and in most beginner tutorials: Aperture The variable opening in the lens through which light passes to the film or digital sensor.Aperture is measured in f-stops. I like to compare it to your pupil, which opens and closes to allow more or less light into your eye depending on the brightness level of the room.Bracketing Taking a series of images at different exposures. You may see a setting on your camera that says AEB (auto exposure bracketing). Bracketing is often used when creating HDR images or in difficult lighting situations where you may want to have a range of exposures from light to dark.Bulb the B setting on your camera where the shutter remains open for as long as the button or cable release (remote trigger) is pressed.DSLR A digital single-lens reflex camera. Any digital camera with interchangeable lenses where the image is viewed using a mirror and prism and the image is taken directly through the lens. What you see in your viewfinder is what the lens sees.EV Exposure value; this is a number that represents the various different combinations of aperture and shutter speed that can create the same exposure effect.Exposure compensation Modifying the shutter speed or aperture from the cameras recommended exposure to create a certain effect or correct for exposure problems. Your camera reads light bouncing off your subject and is designed to expose for medium gray. So when photographing a subject that is lighter or darker than 18% gray, you can use this setting to tell the camera the proper exposure (by dialing in or + exposure compensation).Exposure The total amount of light reaching the digital sensor. It is determined by the aperture, shutter speed, and ISO.F-stop A measure of the aperture opening in the lens defined by dividing the focal length of the lens by the aperture diameter. The sequence of f-stops features multiples of the square root of 2 (1.4): 1, 1.4, 2, 2.8, 4, 5.6, 8, 11, 16, 22, etc. Though these numbers are rather cryptic, make sure to remember that each step is double the amount of light. Know that, and youve won half the battle.ISO Represents the sensitivity of your cameras digital sensor to light. The lower the number (ISO 100), the less sensitive to light; the higher the number (ISO 3200), the more sensitive to light. A higher ISO allows you to shoot in low-light conditions.Shutter speed The amount of time the shutter is open during an exposure. The shutter speed controls the appearance of motion. Use a fast shutter speed (such as 1/2000s) to freeze motion or a slow shutter speed (such as 1/30s or longer) to blur moving objects.Zoom lens Any lens that has a variable focal length, such as a 24-70mm or an 18-55mm lens. You generally zoom in or out by rotating the barrel of the lens.Prime or fixed lens Any lens that does not zoom and features a set focal length, such as a nifty 50mm lens.Remote trigger or digital cable release A device that allows the camera to be fired without pressing the shutter button or touching the camera. Helps eliminate camera movement during long exposures.Macro lens A lens that focuses very close to a subject, so you can capture highly detailed, magnified images. Normal lens Generally a 50mm lens (on a full-frame camera). This lens closely parallels what the human eye sees.If you have a crop-sensor camera, a normal lens will be closer to 35mm.Telephoto lens Offers a tighter field of view than a normal lens (i.e., it takes more magnified images). Generally from around 70mm to 300mm. A super-telephoto lens is usually 300mm or longer.Wide-angle lens A lens that features a wider field of view than a normal lens. Generally spans from over 10mm to under 50mm. Depending on the focal length, there may also be edge distortion (i.e., in super wide-angle lenses).Tilt-shift lens A special-effect lens. Allows for realignment of the plane of focus (tilt). Allows for adjusting the placement of the subject within the frame without angling the camera, thus keeping parallel lines from converging (shift). A popular lens for architectural and landscape photographers and is becoming more widely used by portrait photographers to create a unique, stylized look.Camera resolution The dimensions your cameras sensor is capable of capturing, expressed in megapixels. This is not the only factor in image quality, but the greater the resolution, the larger the prints you can produce without significant loss of quality (generally speaking).JPEG vs RAW Two different image file types. Most cameras have the ability to shoot in JPEG and RAW. If you choose JPEG, the camera will shoot a RAW file, process it using the picture style youve selected in your menu, save it as a JPEG, and discard the RAW version. If you choose RAW, the resulting file will be larger, carry more information, and require software to process. It gives you the photographer more control over the final look of the image.Full-frame vs crop/APS-C sensor A full-frame sensor is roughly the size of 35mm film. Most lenses create a circle of light just large enough to cover the 35mm sensor area. But in a crop-sensor camera, the physical size of the sensor is smaller; it only captures a portion of the entire image the lens is projecting, effectively cropping out part of the shot. Common crop factors are 1.5x and 1.6x, so if you use a 50mm lens on an APS-C camera, it offers a 75mm focal length equivalent.Camera modes There are four standard camera modes. Auto mode selects settings without user input. Manual mode allows the user to control the ISO, shutter speed, and aperture. Shutter Priority mode allows the user to select the ISO and shutter speed while the camera selects the aperture. Aperture Priority mode allows the user to select the ISO and aperture while the camera picks the shutter speed. Program mode allows the user to select the ISO while the camera picks the aperture and shutter speed. Ambient light Also referred to as available light. Ambient light occurs in the scene without adding any flash or light modifiers. It can be daylight, or it can be artificial light such as tungsten or fluorescent bulbs.Main light or key light The main light source for a photograph. It could be the sun, a studio strobe, a flash, a reflector, or something else. Its the source that produces the pattern of light on the subject with the most intensity.Fill light The light source that is secondary to the key light. Used to fill in the shadows. Can be produced with a flash, a reflector, or a studio strobe.Lighting pattern The way the light falls on the subjects face (e.g., at a 45-degree angle).Lighting ratio A comparison between the intensity (brightness) of the main light and the fill light. In other words: the difference between the lit and shadow sides of the subjects face.Incident light meter A handheld device that measures the amount of light falling on a subject. An incident meter is not fooled by the brightness range of the subject, whereas in-camera reflective meters can be fooled (resulting in overexposure and underexposure).Speedlight A small, portable flash that can attach to your cameras hot shoe or stand on its own when activated remotely.Reflector A device used to reflect light (generally back toward the subject). It can be a specialized, factory-made reflector (I recommend getting a 5-in-1), or a piece of white cardboard.Light meter A device that measures the amount of light in a scene. Pretty much all modern cameras offer a built-in light meter, though it uses reflective readings (see the entry on incident light meters, above).Remote flash trigger A device used to fire speedlights off-camera.Subtractive lighting Taking away light to create a darker look. It often involves holding a reflector or an opaque panel over the subjects head to block light from above and open up deep eye shadows caused by overhead lighting. It can also involve holding a black reflector opposite your main light to create a deeper shadow (i.e., essentially reflecting black onto the subject instead of light.)Hard light Harsh or non-diffused light such as that produced by bright sunlight, a small speedlight, or an on-camera flash. Creates harsh shadows with well-defined edges, contrast, and texture (if used at an angle to the subject). Emphasizes texture, lines, and wrinkles. Often used to create a more dramatic type of portrait.Soft light Diffused light, such as that from an overcast sky, north-facing window with no direct light, or a large studio softbox. This type of light produces soft shadows with soft edges, lower contrast, and less texture. Soft light is generally preferred by most wedding and portrait photographers because it flatters the subject.Edge transfer How quickly shadow edges go from dark to light. With harsh light, the edge transfer is very defined and sudden (almost a clear line). With soft lighting, the edge transfer is much more subtle almost imperceptible as it gradually changes from dark to light.Flash sync The synchronization of the firing of an electronic flash and the shutter speed. You need to know what shutter speed your camera syncs at; otherwise, if you use a too-fast shutter speed, you may get a partially illuminated image. For most cameras, the sync speed is around 1/200s. Here are a few other photography terms that are a bit more advanced (including some wacky jargon and slang!). Become familiar with this terminology so you can talk to pros with confidence. Fast glass Refers to a lens with a very large maximum aperture (such as f/1.8 or f/1.2). The lens is fast because it lets you shoot with a fast shutter speed.Chimping Slang term for looking at the back of your camera after every image. Has a negative connotation; if you chimp, youre spending too much time reviewing images on the camera and not enough time shooting.Bokeh The out-of-focus blurred bits in an image background. Most often bokeh occurs when small light sources are in the background.Depth of field(DOF or DoF) The distance between the nearest and farthest objects in your scene that appear in focus.Controlled by many factors, including the aperture, lens focal length, and distance to the subject.Hyperfocal distance The focus distance providing the maximum depth of field for a particular aperture and focal length. Older prime lenses often have hyperfocal distance marks to aid in finding this depth-of-field sweet spot. With todays lenses, it is possible to calculate the hyperfocal distance, but it takes a bit more work and a hyperfocal distance calculator.Gobo Something used to block unwanted or stray light from falling onto the subject. Often the dark side of a reflector is used as a gobo.Scrim A translucent device used to diffuse and soften the light. Can be a reflector with a translucent panel. Scrims can be made extremely large and clamped in place to create shade even in direct sunlight.Shutter lag The slight delay from the time you press the shutter button to the time the shutter actually opens. In DSLRs and mirrorless cameras, shutter lag is minimal and almost unnoticeable. In smaller point-and-shoot cameras, the delay is more pronounced (and can cause you to miss shots of fast-moving subjects).Chromatic aberration Color fringing that can appear in areas of images where dark meets light (e.g., the edge of a building against the sky). CA is correctable to a great degree using Photoshop, Lightroom, and most other editing software.Rear-curtain sync Rear-curtain sync fires the flash at the end of an exposure. By default, most cameras are set to front-curtain sync (i.e., if the flash fires, it does so at the beginning of the exposure). When shooting a moving subject, front-curtain sync will put any motion blur in front of the subject, whereas rear-curtain sync will place the blur behind the subject. Neither is wrong; it depends on the effect youre after.Camera shake When a camera moves during an exposure and creates blur.Lens flare Stray light that creates haze, circles, or other artifacts in an image. Some photographers actually desire lens flare; they position their cameras to create flare and use it as a compositional element.Kelvin The absolute measurement of color temperature. Lower numbers represent warmer colors like orange (tungsten light), whereas the higher numbers are cooler (blues). Play with the color temperature to create different effects.ND filter Stands for neutral density filter. Its a filter designed to go in front of the lens to block out some of the light entering the camera. Often used by landscape photographers to get slow shutter speeds when photographing waterfalls and streams in full daylight.Panning The act of using a slow shutter speed and moving the camera in the same direction as a moving subject. Creates an artistic, blurred background.Stopping down Closing down the aperture to a smaller opening (e.g., going from f/5.6 to f/8).TTL and ETTL TTL stands for through the lens; it refers to the metering system in regard to flash exposure. The flash emits light until it is turned off by the camera sensor. ETTL stands for evaluative through-the-lens metering. It fires a preflash to evaluate and calculate for lost light, then compensates and fires the main flash. It happens so fast you do not see two flashes.Photog Short for photographer. Something pros often call each other.Glass A lens. As in, What glass do you own?Golden hour Also called magic hour. This is the hour or two right before sunset and right after sunrise. The sun is low on the horizon, and it is an optimal time for photography.Spray and pray Shoot as many images as possible while praying you get something good.Blown out An image with no details in the white areas.Clipped Either blown out areas (above) or dark, detailless shadows.Grip-and-grin A quick photoshoot at an event or a setup with two people shaking hands. Most portrait and event photographers have to shoot these at some point in their careers.Selfie A self-portrait.SOOC Straight out of camera; an image with no post-processing.Dust bunnies Dark spots that appear on an image caused by bits of dust on the digital sensor.Pixel peeper Someone who spends too much time looking at images magnified in Photoshop.Nifty fifty A 50mm prime lens. Great to have!ACR Adobe Camera Raw. The editing software thats packaged alongside Photoshop.Flash and drag The method of using a slow shutter speed combined with flash to capture more of the ambient light in proportion to the flash.Wide open Using your lens with the aperture at its widest setting (f/1.8, for example). Whew! That was a long list. If you made it this far, congratulations; you know how to use photography terms like a pro. So get out there and start practicing your photography terminology. Be sure to have lots of fun! Now over to you: What photography terms do you struggle with? Do you have any more terms I should add to this list? Share your thoughts in the comments below! I need help with... Share copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. 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In this article, I will introduce some of the most important photography terminology that every photographer should know, beginner or advanced. There are 50 terms at the moment, but this is an ongoing glossary, and we will be adding more words over time.You may notice that the definitions below are more like functional introductions to each term rather than strict dictionary definitions. Personally, I consider that to be more useful. Sure, shutter speed is the length of time which a cameras shutter is open while taking a photograph but that doesnt tell you much about why shutter speed matters and how to use it. Also note that there are a lot of topics here, and this is a long article so if you want to jump to a specific term, I recommend using the list below:Aperture is perhaps the single most important setting in all of photography.Similar to the pupil in your eye, aperture is an opening in the camera lens that (generally) can change size. A large aperture lets in more light, while a small aperture does not let in as much.For this reason, photographers like using large apertures in low light conditions. The largest aperture a lens offers is called its maximum aperture, while its smallest aperture is called the minimum aperture.Aperture is like the pupil for your camera system.At a given moment, the aperture you are using is designated by an f-number such as f/1.4, f/2, f/5.6, f/8, f/11, and so on.One key these numbers are fractions. So, an aperture of f/2 is larger than an aperture of f/8 (in the same way that 1/2 is larger than 1/8). This can be confusing at first and seem backwards, but it doesnt take long to get the hang of it.This illustration shows some of the most common aperture settings and when you may want to use each one.A typical lens will have a maximum aperture of around f/2.8, and a minimum aperture of around f/22. However, it varies from lens to lens. Some (generally more expensive lenses) have a maximum aperture of f/1.4, f/1.2, or even larger. These are great in low light conditions because like a large pupil they let in a ton of light.Other than capturing more or less light, the biggest impact of aperture is on depth of field (see depth of field below). Small apertures like f/11 and f/16 have more depth of field than large apertures like f/1.4 or f/2.8. If youre a portrait photographer looking for buttery smooth backgrounds, youre probably a big fan of 50mm or 85mm f/1.4 lenses for this reason. (Landscape photographers, like me, rarely need 85mm f/1.4 lenses, which is a great tactic for saving money.)By default, almost every camera autofocuses when you half-press the shutter button. However, sometimes you will want to take a photo without focusing beforehand. Thats where back-button focus comes in.Rather than half-pressing the shutter button, back-button focus focuses via a button on the back of your camera instead. Then (after disabling autofocus from the shutter button), you have more freedom to focus when you want.Practically every camera on the market lets you reassign autofocus to a button on the back of your camera, or it has a button that already does this by default (the AF-On button). Many advanced photographers use back-button focus. But in certain situations, it is still advantageous to use the shutter button to activate autofocus, such as when youre shooting with the rear-view screen low on the ground, trying to get eye-level wildlife shots.When you use large apertures, especially when you zoom in or get close to your subject, youll end up with a shallow focus effect. In other words, your subject will be sharp, while the background will be strongly out of focus.The quality of this out-of-focus region i.e., how it looks, how its rendered is known as bokeh.NIKON D7000 + 17-55mm f/2.8 @ 55mm, ISO 1000, 1/50, f/2.8A lot of specialty portrait lenses (such as 85mm f/1.4 lenses and similar) are ranked more by their bokeh than their sharpness.This term saw a surge in popularity recently when Apple released a commercial about bokeh. However, the quality of background blur is not very good on any phones portrait mode today, since it is all done with imprecise digital blurring effects.You can read more about bokeh in our comprehensive article here.Bracketing simply means taking a series of photos in a row with slight variations.The most common type of bracketing is exposure bracketing, where the photographer uses different shutter speeds (see shutter speed below) to take a sequence of photos with different brightness levels.Most cameras have a bracketing button or menu setting that automatically captures a series of bracketed exposures in a row. This can be useful, although its easy to forget you turned it on and continue bracketing photos for a while by accident.Bracketing button on the Nikon D7000Bracketing can also refer to focus rather than exposure. In this case focus bracketing youre shooting images in sequence that are focused at different distances. Focus bracketing is often used by macro shooters so that they can focus stack to get even more depth of field.In theory, bracketing can refer to almost any variable in photography even something like composition but exposure and focusing are the most common contexts.Every advanced camera lets you select which settings (specifically exposure settings) you will change manually, and which the camera will change automatically. The setup you choose is known as your camera mode.The five most popular camera modes are Automatic, Program, Shutter Priority, Aperture Priority, and Manual. You can switch from one to the other by using the PASM dial on most cameras.Mode dial on an entry-level camera. Note the extra scene modes represented by various icons. These are not recommended; they are essentially just standard Auto-everything modes with a few algorithm changes. Its better to learn how to set things yourself.Advanced photographers generally stick to aperture priority or manual mode, because those are the only two camera modes which give you full control over aperture again, arguably the most important camera setting of all.A common image quality issue youll see in photography is chromatic aberration. Chromatic, of course, refers to color.The two types of chromatic aberration you may see in your photos are called lateral and longitudinal chromatic aberration.The first lateral is more commonly talked about. It typically shows up as red/green, yellow/blue, or cyan/magenta outlines around high-contrast subjects in the corner of an image.Lateral chromatic aberration in the corner of an image (heavy crop)The second longitudinal occurs when there are color fringes in front or behind your photos focus point. This occurs as purple fringing in front of your focus point and green fringing behind.Longitudinal chromatic aberration (mild crop)Both types can be corrected in post-processing software. However, lateral is easier to correct, with fewer residual effects in your photo.Composition is the arrangement of elements in your photograph.Some elements attract a lot of attention, especially those which are familiar (like peoples faces), bright, colorful, or high-contrast. The more attention an object attracts, the more visual weight it has.So, composition is about arranging the visual weight in your photo often to look pleasing, but not always. Composition should match your emotional goal for a photo.In a given scene, different compositions will convey different emotions. Thats why it is so important to select yours with care.This balanced, abstract composition carries a smooth and peaceful emotional message.NIKON D800E + 70-200mm f/4 @ 86mm, ISO 100, 1/10, f/16.0Based on the size of your camera sensor, youre always shooting with a particular crop factor and you may not even know it.Crop factor is calculated relative to the size of full-frame camera sensors. These sensors have a (no-difference) crop factor of 1, because theyre the reference.Smaller camera sensors literally act like crops of full-frame camera sensors. The specific amount of crop is the crop factor. APS-C sensor cameras (one of the most common sensor sizes) have a 1.5 crop factor.Micro Four Thirds cameras have a 2 crop factor.Phones and compact cameras have much smaller sensors, and therefore greater crop factors. The iPhone has a crop factor of about 7 because of its small sensor.If you put the same lens on two cameras with different crop factors, you will appear farther zoomed in with the greater crop factor.For example, if you use a 300mm lens on the Nikon D850 (a full-frame camera, 1 crop factor), you get the expected 300mm field of view. But if you put the same lens on the Nikon D500 (an APS-C camera, 1.5 crop factor), you will have a much tighter view equivalent to 450mm reference.Crop factor also matters if you are trying to calculate equivalent aperture or ISO across different camera systems. See our article Equivalence Also Includes Aperture and ISO for more information.The portion of a photo that is (acceptably) in focus is known as your depth of field.I like to think of depth of field as a window with thick glass that intersects the scene in front of you. Anything that touches the window is within your depth of field; anything farther away from the window is progressively farther and farther out of focus.In a portrait photo, you may want to have a shallow depth of field, where only your subjects face (or even just the eyes) will be in focus. In a landscape, you may prefer the opposite, where everything from the foreground to the horizon is within your depth of field.Taken at a large aperture of f/2.8, which provides a shallow focus effect (thin depth of field)The three ways to get a shallow depth of field are simple: Use a larger aperture, like f/1.4 or f/2.8Zoom inGet closer to your subjectTo get a deeper depth of field, you simply do the opposite. Use a smaller aperture like f/11, zoom out, and move back from your nearest subject.At smaller and smaller apertures (f/16, f/22, even f/32 and f/45), you will start to see your photos get blurrier and blurrier. This blur is known as diffraction.(To see the sharpness differences more clearly, click on the image. Pay particular attention to the pattern of colored dots on the womans face.)Diffraction exists no matter what lens you use; its just a property of physics. In cases where very fine detail needs to be resolved, image degradation will occur at apertures of f/11 or smaller. For coarser details, acceptable images can even be had at f/16, but its probably not a good idea to go beyond f/22.That said, its not the end of the world if you do. Personally, I like shooting macro photography (see macro below), where Im focused very close and my depth of field is extremely shallow. In those cases, I very often use f/22 out of simple necessity, because the only alternative to getting such a depth of field is focus stacking.NIKON D7000 + 105mm f/2.8 @ 105mm, ISO 1250, 1/250, f/22.0Distortion has a few meanings in photography, but the most common refers to an image quality issue (or occasionally feature) present to some degree in most lenses.The three common types of lens distortion are barrel, pincushion, and wavy/mustache distortion. They look exactly like they sound:These types of lens distortion bend straight lines in your photo, which is especially obvious with architectural photography. However, a few specialty lenses fisheyes advertise their extreme distortion as a feature rather than a bug.Taken with the Nikon 10.5mm f/2.8 DX FisheyeCopyright Nasim MansurovLens distortion is generally easy to fix in post-processing with minimal side effects.The other common type of distortion is perspective distortion. In this case, youre getting very close to your subject (and generally zooming out a lot) to exaggerate its features.Sometimes, extreme perspective distortion is nothing more than a gimmick. However, it can be quite helpful in emphasizing interesting foreground subjects, like lines on a sand dune.DSLR stands for digital single lens reflex camera. It is one of the most popular types of advanced cameras, along with mirrorless cameras (see mirrorless below).The two defining aspects of a DSLR compared to other cameras are its digital sensor and its reflex mirror. The reason for a mirror inside the camera is to direct light from the lens to an optical viewfinder. When you take a photo, the mirror swings out of the way so as not to block your camera sensor.Today, the only company that still actively pursues the DSLR is Pentax, although there are still plenty of great used Canon and Nikon DSLRs floating around.Nikon D850 DSLRA digital photo has more information embedded in its file than you may realize. Alongside the image data itself, most cameras also embed information like your camera settings, date/time of capture, and copyright information. This additional information is known as EXIF data.EXIF stands for Exchangeable Image Format. It is very useful to look at your EXIF data when post-processing photos so you can get better at using your camera settings. (Before deleting a blurry photo, look at its EXIF data to see if you can spot a problem with the camera settings you used.)I recommend eliminating EXIF data from certain photos you post online due to privacy concerns, especially if the photos are tagged with GPS coordinates. Almost all post-processing software lets you delete EXIF data upon export.An EXIF viewing programThere are several different meanings to the word exposure in photography. Most of them have to do with the brightness of your image, but not all. Here are the most common: A substitute for photo (I took a few exposures of this scene.)A substitute for shutter speed (Ill need a long exposure here.)Your shutter speed and aperture values (My exposure for this shot is 1/10 second at f/8.)Your shutter speed, aperture, and ISO settings (My exposure settings for this shot are 1/10 second, f/8, ISO 100.)The brightness of your photo (This photo is too dark; its underexposed.)Precisely what a photographer means when they say exposure depends on the context. However, it is always tied to the brightness of your photo and the amount of light you capture.This camera setting, exposure compensation, is a way to inform the camera to brighten or darken the photo compared to the camera settings you are currently using. (Specifically, compared to the metered exposure; see metering below.)For example, perhaps youre shooting a landscape, and part of your sky is blown out (too bright). To tell the camera to take a darker photo, you could input negative exposure compensation.Note that exposure compensation does not darken the photo in all-manual mode, when you are in full control over aperture, shutter speed, and ISO (see shutter speed and ISO below). Thats because aside from flash those are the only three settings which can change the brightness of an image.When you dial exposure compensation, the camera cannot magically take a darker photo without altering one of these variables. So if you are in aperture-priority mode (where the aperture is fixed), the camera will only ever adjust shutter speed or ISO when you use exposure compensation.Personally, I use exposure compensation a lot, especially in combination with aperture priority mode. Specifically, when I take a landscape photo, I will select my aperture manually (because its so important to depth of field), then manually set my ISO to its lowest value. This leaves only one variable to adjust automatically shutter speed. So, the camera adjusts shutter speed as the light changes, and I can nudge it either brighter or darker if the camera is consistently under/overexposing.The exposure triangle refers to the big three camera settings aperture, shutter speed, and ISO (see ISO below). Aside from your flash, these are the only camera settings that alter the brightness of an image.The Exposure TriangleNote, however, that many photographers do not consider ISO to be part of exposure. While shutter speed and aperture physically change how much light you capture, ISO merely brightens the photo after the fact not unlike raising brightness in post-processing. To keep the triangle name intact, a third variable brightness of the scene is sometimes used instead.In reality, though, ISO still matters even though it doesnt change how much light you physically capture. Indeed, Id argue that the exposure triangle is actually a square. Shutter speed, aperture, ISO, and scene luminance all affect the brightness of your out-of-camera image.But when you hear a photographer refer to the exposure triangle in context unless theyre lamenting how inaccurate of a concept it is theyre probably just talking about aperture, shutter speed, and ISO.Filters are attachments to the front of your camera lens, or occasionally to the back. Filters are usually made of glass, resin, or plastic. They generally are meant to alter the quality of light that reaches your camera sensor. However, there are also protective filters to prevent scratches on the front of your lens.Most lenses today have threads on the front to make it easy to attach filters. However, some specialty lenses especially ultra-wides may require separate filter holding systems in order to work.The most popular and often the most useful type of filter is a polarizer. These filters rotate to block or accentuate polarized light. This reduces reflections and distant haze in your photos, and cannot be replicated easily (or at all) in Photoshop.Without PolarizerWith PolarizerPlenty of other filters exist, including dark filters (AKA neutral density filters), graduated filters (to adjust just part of the photo, like the sky), and color filters.Also, some smartphone apps like Instagram call their editing presets filters, but we dont talk about that here :)Focal length is a property of camera lenses. Its important because it tells you how far zoomed-in you are.Focal length is written in millimeters, where a greater number represents a longer focal length (more zoomed-in).This Fujifilm lens has a focal length of 50 mm.Copyright Elizabeth GrayEarlier in this glossary, I defined crop factor and mentioned that small camera sensors act, essentially, as crops of larger sensors. In other words, the same focal length may appear to be farther zoomed in on certain cameras than others.On higher-end cameras with large sensors, a long focal length (AKA a telephoto that is zoomed in a lot) is anything about 100mm and more. The giant telephoto lenses that sports photographers use at the Olympics tend to be at least 300mm, and often as much as 800mm.Wide-angle lenses (good for landscapes) tend to be 35mm or less. A popular wide-angle lens offered by many manufacturers is a 16-35mm zoom lens.When you are trying to figure out a lenss focal length, just look in the lens name before the mm marking. Zoom lenses cover a range of focal lengths, while prime lenses cover just a single focal length. See prime lens and zoom lens below.Aside from the big three camera settings aperture, shutter speed, and ISO the most important setting to get right in photography is focusing.With most lenses, you can only focus at one distance at a time. For example, you may choose to focus your lens 10 feet / 3 meters away. This means that any subject 10 feet away from the plane of your camera sensor will be maximally sharp, while other distances will be more and more out of focus.How do you focus properly? Cameras typically offer a huge number of autofocus options. One of the most common is single-servo versus continuous-servo AF. This tells the camera whether to focus once when you press the focusing button, or continually focus as your subject moves. I leave it on single-servo (AF-S) for landscapes and continuous-servo (AF-C) for wildlife and portraiture.NIKON D800E + 70-200mm f/4 @ 175mm, ISO 100, 1/250, f/4.0Another common option is the function of your autofocus points (the dots/squares that have autofocus capabilities). You can choose just a single autofocus point, 3D-tracking autofocus across all points, automatic (camera-selected) autofocus points, and often many other options. I recommend reading your camera manual to see which options you have, and when to use each one.Of course, if the cameras autofocus system is not locking onto your subject properly, you can always choose to focus manually.Also see our article on focusing in photography for more.Camera sensors cannot see high-contrast details nearly as well as our eyes can. If there are deep shadows beneath a bright sky, you pretty much have to choose one or the other to capture properly; the other will be poorly exposed.One common fix to this problem is to create an HDR, or high dynamic range image. This involves taking two (or often more) photos with different exposures. Then, blend together the best parts of each in post-processing software.Dedicated HDR photographers often use their cameras bracketing feature to speed up capture. Indeed, the faster you take a series of HDR photos, the better; if something like a cloud is moving in the image, a quick series of photos will be easier to blend.Three-shot HDR, blended in PhotoshopPhotographers realized a while ago that it is possible to expand the capabilities of a camera by taking multiple images, then blending the best parts of each together. HDR photography (the term directly above) is just one example.Here are just a few more: Creating a panorama out of several single imagesAveraging a series of identical compositions together to reduce noise (see noise below)Focusing at different distances to make a focus stack with high depth of fieldMore controversial blending, like sky replacement or time blending (merging two different photos of the same scene taken many minutes or hours apart from each other)Image blending is frequently done in software like Photoshop (see Photoshop below). Certain types of image blending are more accepted than others among photographers. In fact, many publications and photo competitions do not allow image blending at all, or may only allow panoramas and HDR.Image stabilization is a feature of many camera lenses and now a number of camera sensors themselves to counteract shake from handholding your camera.Lens-based image stabilization works by moving lens elements along (generally) either three or five axes to compensate for any movement it detects. Camera-based stabilization (known as IBIS or in-body image stabilization) does the same sort of thing, but it moves your camera sensor directly.Both types of image stabilization are very useful in photography, especially when handholding in low light conditions. Image stabilization lets you take pictures in environments that are several times darker than what you could otherwise capture.Lenses and cameras typically advertise in the range of four to six stops of improvement. One stop is equal to a doubling of your shutter speed (see shutter speed below). So, if you normally could handhold an image sharply at 1/60 second, a four stop improvement would be 1/30 > 1/15 > 1/8 > 1/4 second. A six stop improvement would let you handhold at a whopping 1 second with high levels of sharpness.However, almost all of these 4-6 stop improvement claims are exaggerated. Im personally happy when I get 3 stops of improvement, and 4 is among the best on the market. And keep in mind that image stabilization cannot help you if part of your frame is moving, such as with moving animals.Photographers editing images should care a lot about color accuracy. After all, if you are editing photos on an inaccurate monitor, who knows what colors you are really editing?The monitor of choice for most photographers is an IPS, or in-plane switching monitor. These are sold by many different companies, ranging from inexpensive to ultra-high-end.IPS monitors have several benefits over traditional TN panels. The most obvious is that they have consistent color at different viewing angles, as shown in the comparison below:Your monitor problems wont be solved simply by getting an IPS monitor; some of them are not very good, either (see our recommendations). But if you dont have an IPS monitor already, you definitely should get one (along with proper color calibration equipment). This is one of the most overlooked, yet important pieces of equipment a photographer should have.Read our larger guide to IPS monitors if you want more information on the benefits of this type of monitor.One of the three most important settings in photography is ISO. Like shutter speed and aperture, changing ISO affects a photos brightness.The lowest native ISO on a camera is called the base ISO. Base ISO usually around ISO 100 results in the darkest images. As you increase ISO, your photos will get brighter, which is useful in dark environments. Cameras often max out at ISO 6400, 12800, 25600, or even higher.Youll notice that higher ISO settings start to look very low-quality, with lots of graininess and discoloration. (The graininess is called noise see noise below.) However, in dark environments, you may have no choice but to use a higher ISO; otherwise your photo will be far too dark.To introduce the concept of ISO, some photography instructors will compare it to the ASA, or sensitivity, of a particular film. Others compare it to pushing a photograph brighter in post-production. Neither of these comparisons is perfectly accurate, but they each have elements of truth that may help you conceptualize ISO.In either case, note that changing ISO does not alter the amount of light you physically capture in-camera (unlike shutter speed and aperture). The less light you capture, the lower your image quality will be this is the real cause of noise/grain in dark environments! and the higher your ISO needs to be in order to capture a bright image.NIKON D800E + 20mm f/1.8 @ 20mm, ISO 3200, 20 seconds, f/2.2The single most common file type for photographs is JPEG. Chances are youve heard of JPEGs before but there are a few things about them that photographers need to know.To start, although JPEG is essentially the default file format of photography, that doesnt mean it is the best. In fact, JPEG images are often heavily compressed, and they are only capable of showing 8-bit color (256 shades each for red, green, and blue channels). By comparison, many cameras can shoot RAW files with 14-bit color, which stores a whopping 16,384 shades each for red, green, and blue channels. See our article on JPEG vs RAW, and also see the entry for RAW below.JPEGs, however, have the advantage of being very small files and highly compatible with almost every application. Every photo you see in this article, I uploaded to Photography Life as a JPEG for precisely these reasons.I recommend thinking of JPEG as the optimal output file type for many uses (especially online), but generally not the optimal starting file type.Glass does not transmit all the light that hits it; it also reflects some light back to you like a mirror. This should be immediately clear any time you look at a window at night, with sources of light bounding off it.The glass in camera lens functions the same way, though manufacturers use plenty of expensive coatings these days to minimize reflections as much as possible. Why? Because lenses without anti-reflective coatings are often very prone to flare.Flare occurs when bright sources of light in an image have misshapen ghosts that appear elsewhere in your photo. Youve probably seen this sort of thing in countless movies:(And no, I didnt add any flare to this photo in post-processing! But I did shoot in infrared, which often exaggerates flare.)NIKON D800E + 14mm f/2.4 @ 14mm, ISO 100, 1/30, f/13.0Lens flare is sometimes an interesting effect, but it generally is something that photographers try to avoid. Personally, as a landscape photographer, I dont want to have big, green blobs of light interfering with my subject all the time.The most effective solution to lens flare is simply to use lenses with good coatings and to avoid cheap lens filters, especially low-quality protective filters. If worse comes to worst, you can always use our image blending trick to get rid of pesky lens flares.Photography is the capture of light. Its easy to forget that when you see an amazing landscape or interesting animal in front of your camera, but all youre actually photographing is light.One of the biggest things that separates a good photo from a bad one is the quality of its light. Ive seen countless smartphone photos that decimate the average photo from a $3000 DSLR. Not because the phone is (even close to) the better camera, but because of the light.Light carries emotion. Good light is light that harmonizes with the emotional message youre trying to convey. Even the most beautiful sunset isnt necessarily good light, and the dullest overcast sky isnt necessarily bad light. Either could be a good or bad fit, depending on the look you want to capture.Harsh, mid-morning sunlight? Its not what youd traditionally call good light, but it works well here. After all, the mountain itself is quite harsh and intense. So ask yourself what type of light would work best for your subject, thensearch for that.NIKON D810 + 70-200mm f/2.8 @ 70mm, ISO 140, 1/500, f/9.0Perhaps the single most popular post-processing software for dedicated photographers is Adobe Lightroom.Photoshop (also an Adobe product) is better-known among non-photographers, but its complex set of tools is actually geared toward graphic design rather than photography in many cases. See Photoshop below.Lightroom is strictly photography-oriented. It works by loading all of your images into a Lightroom catalog, from which you can organize and sort the photos as you like. You can also edit the images youve loaded into Lightroom.A lot of photographers will be confused at first to see that Lightroom has no save button for editing images, and any edits you do will not appear in any software outside of Lightroom.These are features, not bugs. Every one of your Lightroom edits is stored in the catalog file not baked into the original image. Lightroom also saves your edits in real time. The only way to lock in an edit is to export the image from Lightroom. This is something youll do any time you want to put one of your images online, print it, or open it in other post-processing software.As you may have gathered, even though Lightroom is simpler than Photoshop and geared strictly toward photographers, its still a complex piece of software. We wrote an article explaining Lightroom in-depth if youre trying to wrap your head around it.When your shutter speed (see shutter speed below) is a few seconds or more, you are considered to be shooting with a long exposure.The actual shutter speed cutoff for long exposure is flexible, and not particularly important. Some photographers may not consider the term to apply unless youre using a multi-minute exposure, and thats fine.One of the main reasons to shoot long exposure photos is that it blurs any quick-moving objects in your frame (and plenty of slow-moving objects, too). Thats one reason why long exposure photography is often associated with photographing clouds or the ocean.30 second shutter speed. Taken with an ND filter to allow a long exposure during daylight.Close-up photography photographing bugs, flowers, and other small things is often known as macro photography.The technical definition of macro photography is any photo taken at 1:1 magnification or greater. 1:1 magnification means that the subject is the same size on your camera sensor as it is in the real world. (In other words, a one-inch ant filling a one-inch-wide camera sensor is exactly 1:1 magnification.)However, even lens manufacturers dont stick to this definition all the time. Youll often see macro lenses that only get to half of 1:1 magnification, or even less.Regardless, one of the amazing things about macro photography is that you can do it almost anywhere. It is one of the few genres of photography where you can take world-class photos literally in your backyard. And thanks to the availability of older, manual focus lenses, it doesnt have to be all that expensive anyway. (Even with the best equipment, many macro photographers use manual focus for a large number of their photos.)NIKON D7000 + 105mm f/2.8 @ 105mm, ISO 800, 1/250, f/8.0The only camera mode which offers full control over both shutter speed and aperture is manual mode. You can also shoot ISO manually in manual mode, although most cameras allow you to set Auto ISO in manual mode if you so desire.Personally, I primarily use manual mode when I need consistency from shot to shot, like making a panorama. However, I will also use it in cases when my cameras metering system (see metering below) is not working properly, like Milky Way photography.A lot of photographers see manual mode as the only professional camera mode, while the others are for beginners. However, dont get hung up on this mentality.The big downside of manual mode is that it doesnt change exposure as the light changes. This is fine in many cases, but in fast-moving conditions, I personally default to aperture priority mode for my photography. So do many other photographers I know, including Nasim.Metering is how your camera reads the light in a scene brightness, darkness, contrast and recommends an exposure (in this case, meaning a combination of shutter speed, aperture, and ISO that will result in a photo of the proper brightness).The metering system is not always perfect. It can be fooled when there is a large amount of white or black in a scene, such as a snowy scene with few dark shadows. Thats because to simplify things a bit metering systems aim to expose the whole photo roughly to middle gray, meaning an exact midtone. White scenes become gray; black scenes become gray. Modern cameras are better at this than they used to be, but all can be fooled.The high amount of white snow in this photo can easily fool a camera meter. Here, I used +1/3 stop of exposure compensation; otherwise, the camera was underexposing slightly.NIKON D800E + 70-200mm f/4 @ 200mm, ISO 140, 1/800, f/7.1Thats why exposure compensation exists (or, in manual mode, watching your exposure carefully and manually making corrections one way or another).Metering systems often allow you some choices in configuring them properly. One of the most common is to select among Matrix, Center-Weighted, and Spot (though the exact names vary from brand to brand). Matrix is the default, taking into account the entire image and representing the cameras best guess at a good exposureCenter-weighted prioritizes a central region of the image and tries to make it middle graySpot metering only measures a very small portion of the scene either your focus point (on some cameras) or the very center point of the image (on other cameras)I leave mine set to Matrix by default, and only occasionally switch to Spot if Matrix is consistently exposing my subject wrong.Megapixels is simply a term for the resolution of your camera sensor. For example, a lot of sensors today have a resolution of 6000 pixels across by 4000 pixels tall. If you multiply this out, youll end up with a total of 24 million pixels i.e., 24 megapixels.Its very popular for camera companies today to advertise megapixel count above all other factors. However, this is far from the most important factor in image quality. There are plenty of high-megapixel cameras today that I wouldnt touch with a ten foot pole.See the 41-megapixel Nokia Lumia 1020 smartphone, for example. It has a lot of megapixels, but megapixels arent what make image quality. Far, far more important is the cameras sensor size and smartphones universally have tiny camera sensors.That said, a higher megapixel count will give you some additional detail, all else equal. It can be useful for sports and wildlife photographers who do heavy cropping, for example. However, few photographers will need (or make the most of) anything more than 24 megapixels. Worry about other areas of image quality long before you worry about this one.If youre really desperate for megapixels, try shooting a panorama. This multi-row panorama has a whopping 231 megapixels in the final, cropped version.NIKON D800E + 105mm f/2.8 @ 105mm, ISO 100, 1/10, f/16.0Check out this article for more information about megapixels and how they affect photography.Technically, any camera without a mirror including smartphones, point-and-shoots, and disposable film cameras are mirrorless. But when photographers refer to mirrorless cameras, they are almost always talking about high-end cameras that allow you to change lenses. In other words, the camera that replaced the DSLR in new camera markets.Mirrorless cameras are the most popular type of camera today with advanced photographers. They offer more advanced autofocus, better-designed lenses, and other nice features like great electronic viewfinders and better video.That said, DSLRs have plenty of advantages of their own, including better battery life and an infinite-resolution optical viewfinder.None of that really matters to photography. Fundamentally, a good camera is a good camera. Few people need the mirrorless advantages over a DSLR and few people need the DSLR advantages over mirrorless. (You can read more at our article on DSLR vs mirrorless.)Nikon Z7 mirrorless cameraNoise is essentially visual randomness a grain of bright, dark, and discolored pixels that is especially prevalent in low light conditions.The easiest way to see noise in your photos is to shoot with a high ISO like 6400 or higher. However, you will also see a lot of noise when you shoot an underexposed image at a low ISO (say, ISO 100) and then brighten the photo dramatically in post-processing.Noise can be caused by many different sources. Some of them are related to the camera (i.e., youll see more noise when your camera sensor overheats), while some are due to the inherent randomness of light itself (called photon noise).Bright/dark variations of noise are called luminance noise. Random colorations of pixels are called color noise.ISO 12,800 image with extreme levels of noise (click to see larger)It is fairly easy to reduce a photos noise in post-processing software. However, too much noise reduction can lead to dull colors and plasticky regions of a photo that look unnatural. This is true of both luminance and color noise reduction. Color noise reduction tends to work better, although a lot of photographers overdo it and end up with very flat colors. (For example, Lightrooms default color noise reduction settings are way too high, for instance.)The best solution is to minimize noise in-camera rather than in post-processing. However, in dark conditions especially when shooting handheld, or photographing a moving subject sometimes high noise is just a fact of life.When your photo loses detail because it is too bright, it is said to be overexposed.Overexposure doesnt just mean your photo looks too bright. So long as you can darken the image in post-processing and maintain all your highlight details, the photo really isnt overexposed. Instead, a photo is overexposed when it blows out highlight detail, like bright portions of a cloud. Overexposure = irrecoverable highlight loss.Overexposure is a major problem; there is no way to get back highlight detail that has completely blown out to white. If you try, youll end up with discolored highlights, or worst case highlights that have no color at all, and are completely gray.Overexposed pay attention to the loss of detail in the clouds.NIKON D800E + 20mm f/1.8 @ 20mm, ISO 100, 1/10, f/16.0Because there is no post-processing fix for overexposure, your best bet is to expose the scene properly in-camera. One good tool for this is your cameras blinkies option (generally found in your camera menu under the image review section).When blinkies are turned on, you will want to review your photos and cycle through to the blinkies display. When you do, any overexposed areas in the image will blink between black and white to indicate blown highlights.One of the most complex photo editing programs available if not the single most complex is Adobe Photoshop. With enough time and skill, you can do almost any photo edit you want in Photoshop hence why photoshopping is a phrase so popular that non-photographers almost universally know of it already.Indeed, Photoshop is arguably intended more for graphic design and digital art in general than photography specifically. And that works both ways. The huge number of editing options is great when you need to do some specialty edits, but a lot of photographers avoid Photoshop in favor of photo-specific software instead (including Adobes own Lightroom software).Photoshop is largely based on the concept of layers, where you stack however many images you like on top of one another. You can then edit individual layers and change layers to be partly see-through as needed. This, for example, lets you place a photo of a person (top layer) in a landscape (bottom layer) almost seamlessly.The details, of course, can get quite complicated. The good news is that there are almost endless Photoshop tutorials available today to help you learn anything new.Any lens that cannot zoom is called a prime lens. One example of a popular prime lens made by almost every lens manufacturer is a 50mm f/1.8.Nikon AF-S NIKKOR 50mm f/1.8GAs useful as zoom can be, prime lenses have plenty of advantages of their own. The lack of zoom minimizes a lenss complexity which directly improves things like the lenss size, weight, and often image quality.Highly specialized lenses are often primes for this reason. For example, almost every macro lens today is a prime lens. The same is true of most supertelephotos (like the ones youll see press photographers use at major sporting events), and other exotic lenses like tilt-shift lenses and the like.Prime lens shooters learn to use techniques like creating panoramas and cropping strategically not to mention walking closer and farther back to get the images they want. It can take a bit more time and effort, but I know a lot of photographers who prefer the prime route rather than zooms. Some even say it slows them down, helps them think more, and improves their work as a result.Every advanced camera today lets you shoot RAW photos if you so choose. You should; the alternative is JPEG, and Ive already explained in the JPEG entry above why thats not a good idea.RAW files are amazing because they contain all the imaging data from your camera sensor meaning maximum image quality and post-processing flexibility. If you ever edit your photos, shoot RAW; even if you dont edit your photos, at least shoot JPEG+RAW so that you have the higher quality version if you change your mind later. (For more, see our RAW vs JPEG article if you havent already.)Massively underexposed RAW photoSame image, 4.5 stops of recovery in Lightroom. This would have been impossible with a JPEG.The two main downsides of RAW compared to JPEG are that RAW files take up more space, and they almost always require post-processing in order to look good. By default, RAW photos are very dull when you open them in most post-processing software (unless youve changed the softwares defaults extensively).Technically, RAW itself is not a file type. There is no .RAW file from cameras today only files like .CRW (Canons RAW), .NEF (Nikons RAW), and .DNG (Adobes open RAW format).(As a side note, some photographers today push for the caps-lock RAW to be written lowercase as a result. Personally, I still write RAW rather than raw because it draws more attention, but youre welcome to do as you like.)The takeaway? Shoot in RAW. If youre more comfortable with JPEGs right now, shoot RAW+JPEG and keep the RAWs somewhere safe for future use.The rule of thirds is a rule that says you should divide your photo into thirds (both horizontally and vertically) like a tic-tac-toe board. Then according to this rule place your main subject at one of the four intersection points, and place your horizon along the top or bottom third.My personal thoughts on the rule of thirds are, to put it simply, not positive. I think that one of the most ridiculous things about photography is when people try to fence in a creative process like composition and simplify it into a cookie-cutter rule. Any value that the rule of thirds brings say, teaching photographers about off-center composition should, in my opinion, be taught some other way. (A more detailed explanation here of why I think this.)But thats just how I see it, and certainly not everyone agrees. Clearly, as the most well-known composition rule out there, the rule of thirds is helpful to a lot of photographers. Some, I know, consider it to be a good default; others use it just as an occasional guideline to remind themselves of the value of off-center composition.Wherever you fall, keep in mind that composition is one of the most personal, creative parts of photography. Dont take any rule as gospel, or you could risk losing what makes your style unique.As the name implies, sensor size is simply the dimensions of your camera sensor. Some of the most common digital camera sensor sizes are below: Medium Format (Uncropped): 40.4 54 mmMedium Format (Cropped): 33 44 mmFull-Frame: 24 36 mmAPS-C: 15.6 23.6 mmMicro Four Thirds: 13 17.3 mmOne Inch: 8.8 13.2 mm1/2.5: 4.3 5.8 mmThis is how they look graphically:More than perhaps any other factor of a camera, sensor size has a major effect on your image quality. Its not enough that you should sacrifice on a good lens to get a larger sensor but its an important factor nonetheless.Photographers chase after sharpness unlike almost anything else in photography. In reality, sharpness does matter, but only to a point. If your photo is very blurry (and goes without saying that wasnt your goal), youve clearly got a problem.Thats how I recommend thinking about sharpness. Maximizing sharpness is great, no doubt, but the first step is clearing the acceptable sharpness bar every time. One of the most disappointing things you can do is capture an otherwise-incredible photo that isnt sharp enough for anything but a tiny print.To maximize sharpness, the best thing you can do is look for sources of blur and minimize them. The most common sources of blur are missed focus, lack of depth of field, and motion blur (either from handholding or from a fast-moving subject). We have a very detailed article on taking sharp photos, which is a good place to start.NIKON D3500 + 18-105mm f/3.5-5.6 @ 70mm, ISO 100, 1.6 seconds, f/6.3One final thing to note about sharpness is that a lot of post-processing software has a sharpening slider that may catch your eye. To a degree, it does what it says improving low-level contrast in an image and making it appear sharper. I almost always sharpen my images in post-processing. However, it is extremely easy to oversharpen using this setting and end up with weird, crunchy detail that just doesnt look natural. Sharpen your photos, sure, but do so in moderation.And now we come to shutter speed, arguably the second most important setting in photography (only behind aperture). Ive mentioned it in numerous other terms throughout this article as a result.Shutter speed is the amount of time your camera spends taking a picture. This is usually measured in fractions of a second, like 1/100 or 1/4000. However, you may sometimes shoot with longer shutter speeds that are several seconds or even several minutes long.What effects does shutter speed have? The two important ones are exposure and motion blur.Starting with exposure the longer your camera spends taking a photo, naturally, the more light it captures. This leads to brighter and brighter images. When your shutter speed is several seconds long, you will capture a very bright possibly overexposed photo, unless the scene itself is quite dark. (For example, with Milky Way photography, my default shutter speed is about 20 seconds.)The other major effect is motion blur. The faster your shutter speed, the more you freeze any movement in an image. If you are photographing sports, youll often want to be at 1/500, 1/1000, or even faster. Otherwise, your subject will be too blurry.NIKON D7000 + 105mm f/2.8 @ 105mm, ISO 280, 1/400, f/4.0By the same token, its impossible to handhold sharp photos if your shutter speed is too long. Keep it to a maximum of 1/100 second if youre handholding, unless youve tested with your particular lens and know you can go longer. (Wide-angle lenses and image stabilization allow you to shoot longer than that in many cases.)It shouldnt be a surprise that your subject in photography is simply the object that you are photographing. However, the importance of your subject cannot be overstated.Personally, I always pay attention to the primary subject in an image. This is the part of the photo that my viewer will notice first. I always give the primary subject enough breathing room and avoid crossing it with less important objects whenever possible.NIKON Z7 + 24-70mm f/4 @ 39mm, ISO 64, 4 seconds, f/11Your subject is important because of the emotions it conveys. Think, in the simplest example, of a person smiling versus frowning. That simple difference alone shapes the mood of the entire photo, and both situations are likely to demand very different decisions on your part lighting, composition, post-processing, and more.The subject is the core of your photo, and of your emotional message. Dont just point your camera at something interesting. Ask yourself why its interesting, how to accentuate the most interesting points, and how to direct your viewers eye to it with your composition.A popular technique today that combines photo and video techniques is time lapse photography. Specifically, a time lapse is a series of photos taken immediately after one another, generally without changing any camera settings or moving the camera drastically. The goal is to capture the movement of a scene as time passes.Time lapses are especially popular for landscape videographers. However, they are also useful as a still photography technique. Sometimes, I will put my backup camera on a tripod and shoot a time lapse while Im busy taking regular photos with my main camera. Nasim especially loves this technique and uses it a lot in the field for landscape photography.However, as useful as this method is for stills, videographers are the real time lapse shooters. Rather than picking a single best light frame from the series, theyll just merge the whole thing into a 5 or 10 second video that drastically speeds up any movement in the scene. Thats why its called time lapse; you show how a landscape or other subject looks as time elapses.The opposite of overexposure is underexposure. This is when your photo is too dark often so dark that you need to do extensive shadow recovery to make your image look right.Unlike overexposure, it is generally possible to brighten dark shadows and recover some usable information. This is true even when the shadows look pitch black out of camera. However, recovering dark shadows inevitably emphasizes noise in the shadow regions as well, harming your image quality.Underexposed very dark, with room left before the clouds blow out.NIKON D800E + 20mm f/1.8 @ 20mm, ISO 100, 1/40, f/16.0Technically, the best exposure for any RAW photo is the one that is as bright as possible without overexposing important highlights whatsoever. This implies that a bright-looking photo can actually be slightly underexposed, if you could have taken it even brighter without losing the highlights. (This principle is known as Exposing to the Right.)For most photographers purposes, though, thats not important. The important thing is just to avoid extreme underexposure. If you need to recover massive amounts of shadow detail without good reason, youre just not capturing the best possible image quality.The viewfinder is the window on your camera that you can look through to see a representation of the image youre about to take. Not every advanced camera has a viewfinder, but most do (and all DSLRs do).In a DSLR, the viewfinder is optical meaning that the DSLRs mirror directs light through a prism or mirror system, and youre looking directly through the lens when you look into the viewfinder.On most mirrorless cameras, the viewfinder is electronic simply a small LCD screen feeding data directly from your camera sensor.Neither optical nor electronic viewfinders are necessarily better than the other. Optical looks more like actually seeing the scene with your eyes, and it takes up much less battery. But electronic can be useful because it gives a more accurate preview of how the image will ultimately look. Photographers have different preferences on this issue, as you would expect.My one recommendation is to get a camera with a viewfinder either type if you can. Not all photographers find them useful, but most will. Thats especially true in bright conditions, or when shooting handheld.One optical problem that all lenses have to some degree is called vignetting. This is nothing more than a darkening of the corners; on many lenses, you wont even notice unless youre photographing a plain gradient (such as the blue sky).However, some lenses have extremely high levels of vignetting, and it absolutely can interfere with the quality of your photos. Vignetting is easy to correct in post-processing, but extreme corrections will reveal a lot of noise in the corners of your image a side effect that may not be easy to fix.The strong vignetting here clearly darkens the top corners of the image.NIKON Z 7 + NIKKOR Z 24-70mm f/4 S @ 24mm, ISO 1600, 15 seconds, f/4.0Vignetting is almost always worse at large apertures like f/1.4, f/2, and f/2.8. However, sometimes you will exaggerate the effects of vignetting by putting a filter on your lens, and you can end up with very dark corners that need to be cropped out even at small apertures like f/8 and f/11.At the end of the day, vignetting is not something to worry about too much. Some photographers even add it intentionally in post-processing to get a more intense effect. But if you have vignetting in your photos where it doesnt belong, it can distract viewers and make your photos look lower in quality.One of the most important, overlooked steps in photography is visualization. This is a planning step in the field before you actually take a photo. Specifically, visualization is the act of picturing, in your minds eye, the best possible final version of the photo youre taking.This includes a lot of thinking and conscious decision making in the field. Is the final version of your photo going to be in color or black and white? What emotions will it have? And how can you get there?If youre struggling with visualization, start asking yourself questions and analyzing every decision you make in the field. Why are you composing the photo this way and not some other? Is your current focal length the best possible focal length for the message you want to convey? Are you shooting at the optimal time of day, or does the best possible version of your photo actually require different light?I find that visualization is the critical step that separates almost-great photos from one-in-a-million shots. Think! Photography rewards creativity and problem solving more than shooting the default image of a scene.The beacon at the top of the Eiffel Tower does not point straight up; it only points up at about a 30 degree angle, spinning around the city 360 degrees. I realized that when the beacon pointed at me, it looked like it was pointing up, making for a striking image. It took a few attempts to get my timing right, but I ended up with this shot and the perfect illusion. Thats the power of visualization.NIKON D7000 + 24mm f/1.4 @ 24mm, ISO 800, 1/30, f/1.4The alternative to a prime lens (see prime lens above) is a zoom. Zoom lenses cover multiple focal lengths, a valuable feature for many photographers.Indeed, the most popular lenses on the market are kit zooms that are included with most cameras, like 18-55mm or 24-105mm lenses. Personally, as much as I love primes, I tend to recommend most photographers start with a zoom in order to better figure out their personal style. (For many, I recommend sticking with a zoom permanently.)The power of a zoom is measured by its zoom ratio the longest focal length divided by the shortest. For example, a 24-120mm zoom is exactly a 5 zoom (because 120 divided by 24 = 5.)You will often see point-and-shoot cameras advertised as 5 zoom or similar. This specification tells you some useful information, but its not everything you need to know. For example, along with the 24-120mm I just mentioned (which is wide-to-telephoto zoom), an 80-400mm lens (telephoto-to-supertelephoto) is also a 5 zoom. But its meant for a totally different purpose distant wildlife/sports rather than everyday usage.Hopefully you found this article and the definitions above to be useful! Before wrapping things up, I do want to make it clear that this is not a full dictionary of every photography term you should know. There are plenty of others that I had to skip, especially some more advanced terminology; Im already nearing the 10,000 word mark and didnt want to push things too far!That said, the terminology above is an awesome place to start, or to use as a refresher if you want to remind yourself what some specific words mean in photography.And as I mentioned in the introduction to this article, we plan to add terms to this glossary over time. So if there is anything you would like me to define, please let me know in the comments section below! Same goes if you have any questions or feedback about these terms and their definitions.When youre a beginner in photography, there can be many terms and expressions that you may have never heard of. Or you are writing a detailed piece of photography coursework and need those extra keywords to help with your marks.These photography related keywords can help you improve your skills and is definitely vital in becoming a better photographer.Feel free to come back once you have read this page, especially if youre researching a photographic technique and need to find a definition.What are Photography Keywords?Photography keywords are specific terms used to describe various aspects, techniques, equipment, and styles related to photography. These keywords play a vital role in organizing and categorizing photographic content, aiding in searches, and improving visibility across online platforms.Importance of Photography KeywordsUtilizing the right keywords can significantly impact the discoverability of your photography work. By incorporating relevant terms into your descriptions, titles, and tags, you increase the likelihood of your images being found by potential clients, collaborators, or enthusiasts.Common Photography Keywords and DefinitionsSo these are the 50+ photographic keywords every beginner photographer should knowAperture: Simply it is the size of the opening of the lens. This can determine the exposure of an image and is measured in f-stops.AE: Automatic Exposure.Ambient light:Is the light that is already present in the scene you are shooting. It can also be known as natural light and is commonly the name for the light.Aperture Priority Mode: Also abbreviated to A or AV on your camera, Aperture Priority Mode is the setting on your camera that will control the f-number while the camera selects a shutter speed to match the light conditions. Therefore this is a semi-automatic mode and is a mode most photographers use.Auto-Bracketing: Is the technique where the camera takes 3 or 5 images in a row all at different exposures. Also known as bracketing, it is what photographers use for their HDR images.B&W: Black and white.Bokeh: Is produced by blurring the background of an image and is popular in portraits as it forces you to focus on the subject.BULB: Normally found in the Manual Mode setting. Bulb mode means the camera will keep taking an image until you tell it to stop, usually used for long exposures. This can be by holding your finger over the button or using a remote for your camera.Burning: Decreases the exposure of an area within your photo. This technique is used within Photoshop and darkroom prints. Its also the opposite of dodging where it increases the exposure of the selected areas.Camera Angle: Is the specific location at which the camera is located so it can take the shot.Camera Obscura: Is a technique where light from a scene outside is projected onto a wall or canvas. This then allows the artist to trace the image with a high amount of accuracy.Camera Raw: Also known as RAW, is an image file that contains a minimal amount of processed data from the scene. Many photographers favour this image format over JPEG as it allows more control at the editing stage.Cloning: Is a digital processing tool that allows you to copy part of an image to another part. This means you can remove part of an image that is unwanted.Composition: Is the placement of relative subjects and elements within an image or scene to create a pleasing feel.Contact Sheet: Used primarily in film cameras, is a sheet of all the frames and is used as a proof print. However, it is now also used with digital images to showcase work to a client from the shoot.Contrast: Is the difference between the light and dark areas within your images. High contrast means the blacks are darker and whites are brighter, vice versa.Cropping: When you make an image smaller by removing the outer parts it is referred to as cropping.Depth of Field: Abbreviated to DOF, is the distance between the closest and farthest subjects in a scene that look noticeably sharp in an image.Double-Exposure: Superimposing two or more images on top of each other creating a unique image.DSLR: Digital Single-Lens ReflexExposure: Is the amount of light entering the cameras sensor. Too much light and the image is overexposed and not enough light and its underexposed.Exposure Compensation: Normally the +/- button on the camera and is where the photographer can control whether you want the image over or underexposed. This can help with sunsets or photographing snow where you want to underexpose and overexpose respectively.f-Stop: Or f-number is the aperture size or aperture stop in a number that controls the size of the lens opening. Therefore controlling the amount of light entering the camera.Feathering: A digital editing technique, blurring and smoothing out edges within the image.Focal Point: Is a way to describe the main part of the image or a point of interest within the image.Glass: Refers to a camera lens.Golden Hour: The hour during sunrise and sunset where you get the best light for your image.Graduated Filter: Normally known as a graduated neutral-density filter, it is a dark filter which is split halfway allowing the sky and ground to be exposed the same.Histogram: Is a graph that shows the tonal values within the image, allowing the photographer to pick out which areas are too dark and too bright.ISO: The sensitivity of a camera sensor is determined by the cameras ISO setting. Lower ISO settings are usually used for bright settings and higher ISOs are used in darker surroundings.JPEG: An image format (Joint Photographic Experts Group) and is the most common default setting for cameras and phones.Macro: Photographing objects that are extremely small. Normally macro photographers would use a lens with a 1:1 ratio, which is the size of the subject on the sensor.Midtone: Or middle tone, describes the middle tones between two colours. For example, grey is the midtone of black and white.Monochrome: Is defined as an image that is made up of one hue or colour. Most black and white images are made up of black, white and grey.ND: Neutral Density.Panning: Moving the camera, usually on a tripod, with a long shutter speed to blur the background.Rule of Thirds: A compositional technique where you place the main subject or horizon off from the centre. If you imagine a 33 grid placed over the image you can place the subjects on the intersecting points which create a more pleasing image. Check out this post for more compositional techniques.Saturation: Can provide a colour boost to your image by allowing you to change selective colours within the image. Monochrome images are 100% desaturated as there is no colour.Sharpening: Sharpening defines the edges within an image and can be used to correct the blur within the image.Shutter Priority: Sometimes S or SV on your camera dial is the mode for which you can change the shutter speed, as the camera matches the correct aperture for the right exposure.Shutter Speed: The length of time the camera shutter is open for, therefore controlling the amount of time light is entering the cameras sensor. Long exposures use longer shutter speeds and sport/action photographers use quick shutter speeds to freeze the subject.Telephoto Lens: Long lenses, typically used by wildlife and sports photographers.Time Lapse Photography: Is a type of photography where a camera captures many images over a set amount of time, to create a video where time is moving faster.Ultraviolet filter: Protects your camera lens from UV light and scratches.Viewfinder: The photographer looks through the cameras viewfinder to focus and frame the shot.Vignetting: Is common in camera lenses and means the darkening of the image corners compared to the centre.VR: Vibration Reduction, image stabilization technology used within lenses.Warm Colours: Normally associated with sunsets and is the reds and yellows within the image.Watermark: Is typically the photographers logo or name imprinted onto an image to protect the photographers image.White Balance: (WB) is used to regulate colours to match the actual light in the scene from fluorescent lighting, sunlight and bulbs and takes into account the colour temperature within the image.Wide-Angle Lens: The focal length of a lens which is classically smaller than a normal lens, it is normally used by landscape photographers to capture wide scenes.If you have any other ideas for keywords please leave them in the comments below and Ill add them in the future.If youre studying photography I highly recommend you check our worksheets onPhotography Analysis!Included in these worksheets are, 3 pages of Photography Keywords and Terms, The Photography Analysis Worksheet and examples of my own analysis work!Thanks again and if you enjoyed reading it please share and even pin it to your Pinterest wall!Some of these links are affiliates which means I make a small percentage if you use my link.You may enjoy readingWhat are the Different Parts of a DSLR Camera?FAQsWhy are photography keywords important?Photography keywords are essential for organizing and categorizing images, improving search visibility, and enhancing online presence.How can I optimize my photography keywords for SEO?To optimize photography keywords for SEO, conduct keyword research, use relevant terms in titles, descriptions, and tags, and ensure consistency across platforms.What is the significance of aperture in photography?Aperture controls the amount of light entering the camera and affects depth of field, exposure, and the aesthetic quality of out-of-focus areas known as bokeh.What are some compositional techniques used in photography?Common compositional techniques include the rule of thirds, leading lines, framing, symmetry, and balance, which help create visually engaging images.How does white balance impact the color accuracy of photographs?White balance adjustments ensure that colors appear natural and neutral under different lighting conditions, preserving the overall accuracy and tone of the image.ConclusionUnderstanding photography keywords and their definitions is fundamental for anyone passionate about photography. By familiarizing yourself with these terms, you can communicate effectively with fellow photographers, improve your technical skills, and enhance the overall quality of your work.You may enjoy readingWhat is Street Art Photography?Art and practice of creating images by recording lightFor other uses, see Photography (disambiguation).Photography of Sierra NevadaPhotography is the art, application, and practice of creating images by recording light, either electronically by means of an image sensor, or chemically by means of a light-sensitive material such as photographic film. It is employed in many fields of science, manufacturing (e.g., photolithography), and business, as well as its more direct uses for art, film and video production, recreational purposes, hobby, and mass communication.[1] A person who operates a camera to capture or take photographs is called a photographer, while the captured image, also known as a photograph, is the result produced by the camera.Typically, a lens is used to focus the light reflected or emitted from objects into a real image on the light-sensitive surface inside a camera during a timed exposure. With an electronic image sensor, this produces an electrical charge at each pixel, which is electronically processed and stored in a digital image file for subsequent display or processing. The result with photographic emulsion is an invisible latent image, which is later chemically "developed" into a visible image, either negative or positive, depending on the purpose of the photographic material and the method of processing. A negative image on film is traditionally used to photographically create a positive image on a paper base, known as a print, either by using an enlarger or by contact printing.Before the emergence of digital photography, photographs that utilized film had to be developed to produce negatives or projectable slides, and negatives had to be printed as positive images, usually in enlarged form. This was typically done by photographic laboratories, but many amateur photographers, students, and photographic artists did their own processing.The word "photography" was created from the Greek roots (phts), genitive of (phs), "light"[2] and (graph) "representation by means of lines" or "drawing",[3] together meaning "drawing with light".[4]Several people may have coined the same new term from these roots independently. Hrcules Florence, a French painter and inventor living in Campinas, Brazil, used the French form of the word, photographie, in private notes which a Brazilian historian believes were written in 1834.[5] This claim is widely reported but is not yet largely recognized internationally. The first use of the word by Florence became widely known after the research of Boris Kossoy in 1980.[6]On 25 February 1839, the German newspaper Vossische Zeitung published an article titled Photographie, discussing several priority claims, especially that of Henry Fox Talbot's, in relation to Daguerre's claim of invention.[7] The article is the earliest known occurrence of the word in public print.[8] It was signed "J.M.", believed to have been Berlin astronomer Johann von Maedler.[9] The astronomer John Herschel is also credited with coining the word, independent of Talbot, in 1839.[10]The inventors Nicphore Nipce, Talbot, and Louis Daguerre seem not to have known or used the word "photography", but referred to their processes as "Heliography" (Nipce), "Photogenic Drawing"/"Talbotype"/"Calotype" (Talbot), and "Daguerreotype" (Daguerre).[9]Main articles: History of photography and Timeline of photography technologySee also: History of the cameraA camera obscura used for drawingPhotography is the result of combining several technical discoveries relating to seeing an image and capturing the image. The discovery of the camera obscura ("dark chamber" in Latin) that provides an image of a scene dates back to ancient China. Greek mathematicians Aristotle and Euclid independently described a camera obscura in the 5th and 4th centuries BCE.[11][12] In the 6th century CE, Byzantine mathematician Anthemius of Tralles used a type of camera obscura in his experiments.[13]The Arab physicist Ibn al-Haytham (Alhazen) (9651040) also invented a camera obscura as well as the first true pinhole camera.[12][14][15] The invention of the camera has been traced back to the work of Ibn al-Haytham.[16] While the effects of a single light passing through a pinhole had been described earlier,[16] Ibn al-Haytham gave the first correct analysis of the camera obscura,[17] including the first geometrical and quantitative descriptions of the phenomenon,[18] and was the first to use a screen in a dark room so that an image from one side of a hole in the surface could be projected onto a screen on the other side.[19] He also first understood the relationship between the focal point and the pinhole,[20] and performed early experiments with afterimages, laying the foundations for the invention of photography in the 19th century.[15]Leonardo da Vinci mentions natural camerae obscurae that are formed by dark caves on the edge of a sunlit valley. A hole in the cave wall will act as a pinhole camera and project a laterally reversed, upside down image on a piece of paper. Renaissance painters used the camera obscura which, in fact, gives the optical rendering in color that dominates Western Art. It is a box with a small hole in one side, which allows specific light rays to enter, projecting an inverted image onto a viewing screen or paper.The birth of photography was then concerned with inventing means to capture and keep the image produced by the camera obscura. Albertus Magnus (11931280) discovered silver nitrate,[21] and Georg Fabricius (15161571) discovered silver chloride,[22] and the techniques described in Ibn al-Haytham's Book of Optics are capable of producing primitive photographs using medieval materials.[citation needed]Daniele Barbaro described a diaphragm in 1566.[23] Wilhelm Homberg described how light darkened some chemicals (photochemical effect) in 1694.[24] Around 1717, Johann Heinrich Schulze used a light-sensitive slurry to capture images of cut-out letters on a bottle and on that basis many German sources and some international ones credit Schulze as the inventor of photography.[25][26]The fiction book Giphantie, published in 1760, by French author Tiphaigne de la Roche, described what can be interpreted as photography.[23]In June 1802, British inventor Thomas Wedgwood made the first known attempt to capture the image in a camera obscura by means of a light-sensitive substance.[27] He used paper or white leather treated with silver nitrate. Although he succeeded in capturing the shadows of objects placed on the surface in direct sunlight, and even made shadow copies of paintings on glass, it was reported in 1802 that "the images formed by means of a camera obscura have been found too faint to produce, in any moderate time, an effect upon the nitrate of silver." The shadow images eventually darkened all over.[28]Earliest known surviving heliographic engraving, 1825, printed from a metal plate made by Nicphore Nipce.[29] The plate was exposed under an ordinary engraving and copied it by photographic means. This was a step towards the first permanent photograph taken with a camera.View from the Window at Le Gras, 1826, the earliest surviving camera photograph. Original plate (left) and colorized reoriented enhancement (right).Carl August von Steinheil and Franz von Kobell's silver chloride photograph of Frauenkirche from the Old Academy, March 1837[30]The first permanent photoetching was an image produced in 1822 by the French inventor Nicphore Nipce, but it was destroyed in a later attempt to make prints from it.[29] Nipce was successful again in 1825. In 1826 he made the View from the Window at Le Gras, the earliest surviving photograph from nature (i.e., of the image of a real-world scene, as formed in a camera obscura by a lens).[31]View of the Boulevard du Temple, a daguerreotype made by Louis Daguerre in 1838, is generally accepted as the earliest photograph to include people. It is a view of a busy street, but because the exposure lasted for several minutes the moving traffic left no trace. Only the two men near the bottom left corner, one of them apparently having his boots polished by the other, remained in one place long enough to be visible.Because Nipce's camera photographs required an extremely long exposure (at least eight hours and probably several days), he sought to greatly improve his bitumen process or replace it with one that was more practical. In partnership with Louis Daguerre, he worked out post-exposure processing methods that produced visually superior results and replaced the bitumen with a more light-sensitive resin, but hours of exposure in the camera were still required. With an eye to eventual commercial exploitation, the partners opted for total secrecy.Nipce died in 1833 and Daguerre then redirected the experiments toward the light-sensitive silver halides, which Nipce had abandoned many years earlier because of his inability to make the images he captured with them light-fast and permanent. Daguerre's efforts culminated in what would later be named the daguerreotype process. The essential elementsa silver-plated surface sensitized by iodine vapor, developed by mercury vapor, and "fixed" with hot saturated salt waterwere in place in 1837. The required exposure time was measured in minutes instead of hours. Daguerre took the earliest confirmed photograph of a person in 1838 while capturing a view of a Paris street: unlike the other pedestrian and horse-drawn traffic on the busy boulevard, which appears deserted, one man having his boots polished stood sufficiently still throughout the several-minutes-long exposure to be visible. The existence of Daguerre's process was publicly announced, without details, on 7 January 1839. The news created an international sensation. France soon agreed to pay Daguerre a pension in exchange for the right to present his invention to the world as the gift of France, which occurred when complete working instructions were unveiled on 19 August 1839. In that same year, American photographer Robert Cornelius is credited with taking the earliest surviving photographic self-portrait.A latticed window in Lacock Abbey, England, photographed by William Fox Talbot in 1835. Shown here in positive form, this may be the oldest extant photographic negative made in a camera.In Brazil, Hercules Florence had started working out a silver-salt-based paper process in 1832, later naming it photographia, at least four years before John Herschel coined the English word photography. In 1834, having settled on silver nitrate on paper, a combination which had been the subject of experiments by Thomas Wedgwood around the year 1800, Florence's notebooks indicate that he eventually succeeded in creating light-fast, durable images.[32] Partly because he never published his invention adequately, partly because he was an obscure inventor living in a remote and undeveloped province, Hrcules Florence died, in Brazil, unrecognized internationally as one of the inventors of photography during his lifetime.[33][34][35]Meanwhile, a British inventor, William Fox Talbot, had succeeded in making crude but reasonably light-fast silver images on paper as early as 1834[36] but had kept his work secret. After reading about Daguerre's invention in January 1839, Talbot published his hitherto secret method in a paper to the Royal Society[36] and set about improving on it. At first, like other pre-daguerreotype processes, Talbot's paper-based photography typically required hours-long exposures in the camera, but in 1840 he created the calotype process, which used the chemical development of a latent image to greatly reduce the exposure needed and compete with the daguerreotype. In both its original and calotype forms, Talbot's process, unlike Daguerre's, created a translucent negative which could be used to print multiple positive copies; this is the basis of most modern chemical photography up to the present day, as daguerreotypes could only be replicated by rephotographing them with a camera.[37] Talbot's famous tiny paper negative of the Oriel window in Lacock Abbey, one of a number of camera photographs he made in the summer of 1835, may be the oldest camera negative in existence.[38][39]In March 1837,[30] Steinheil, along with Franz von Kobell, used silver chloride and a cardboard camera to make pictures in negative of the Frauenkirche and other buildings in Munich, then taking another picture of the negative to get a positive, the actual black and white reproduction of a view on the object. The pictures produced were round with a diameter of 4cm, the method was later named the "Steinheil method".In France, Hippolyte Bayard invented his own process for producing direct positive paper prints and claimed to have invented photography earlier than Daguerre or Talbot.[40]British chemist John Herschel made many contributions to the new field. He invented the cyanotype process, later familiar as the "blueprint". He was the first to use the terms "photography", "negative" and "positive". He had discovered in 1819 that sodium thiosulphate was a solvent of silver halides, and in 1839 he informed Talbot (and, indirectly, Daguerre) that it could be used to "fix" silver-halide-based photographs and make them completely light-fast. He made the first glass negative in late 1839.Wilson Chinn, a branded slave from Louisianaper The New York Times, "one of the earliest and most dramatic examples of how the newborn medium of photography could change the course of history."[41]Advertisement for Campbell's Photograph Gallery from The Macon City Directory, c.1877In the March 1851 issue of The Chemist, Frederick Scott Archer published his wet plate collodion process. It became the most widely used photographic medium until the gelatin dry plate, introduced in the 1870s, eventually replaced it. There are three subsets to the collodion process; the Ambrotype (a positive image on glass), the Ferrotype or Tintype (a positive image on metal) and the glass negative, which was used to make positive prints on albumen or salted paper.Many advances in photographic glass plates and printing were made during the rest of the 19th century. In 1891, Gabriel Lippmann introduced a process for making natural-color photographs based on the optical phenomenon of the interference of light waves. His scientifically elegant and important but ultimately impractical invention earned him the Nobel Prize in Physics in 1908.Glass plates were the medium for most original camera photography from the late 1850s until the general introduction of flexible plastic films during the 1890s. Although the convenience of the film greatly popularized amateur photography, early films were somewhat more expensive and of markedly lower optical quality than their glass plate equivalents, and until the late 1910s they were not available in the large formats preferred by most professional photographers, so the new medium did not immediately or completely replace the old. Because of the superior dimensional stability of glass, the use of plates for some scientific applications, such as astrophotography, continued into the 1990s, and in the niche field of laser holography, it has persisted into the 21st century.Main article: Photographic filmUndeveloped Arista black-and-white film, ISO 125/22Hurter and Driffield began pioneering work on the light sensitivity of photographic emulsions in 1876. Their work enabled the first quantitative measure of film speed to be devised.The first flexible photographic roll film was marketed by George Eastman, founder of Kodak in 1885, but this original "film" was actually a coating on a paper base. As part of the processing, the image-bearing layer was stripped from the paper and transferred to a hardened gelatin support. The first transparent plastic roll film followed in 1889. It was made from highly flammable nitrocellulose known as nitrate film.Although cellulose acetate or "safety film" had been introduced by Kodak in 1908,[42] at first it found only a few special applications as an alternative to the hazardous nitrate film, which had the advantages of being considerably tougher, slightly more transparent, and cheaper. The changeover was not completed for X-ray films until 1933, and although safety film was always used for 16mm and 8mm home movies, nitrate film remained standard for theatrical 35mm motion pictures until it was finally discontinued in 1951.Films remained the dominant form of photography until the early 21st century when advances in digital photography drew consumers to digital formats.[43] Although modern photography is dominated by digital users, film continues to be used by enthusiasts and professional photographers. The distinctive "look" of film based photographs compared to digital images is likely due to a combination of factors, including (1) differences in spectral and tonal sensitivity (S-shaped density-to-exposure (H&D curve) with film vs. linear response curve for digital CCD sensors),[44] (2) resolution, and (3) continuity of tone.[45]Main article: Monochrome photographySee also: Black-and-WhiteSee also: Black and White PhotographyA photographic darkroom with safelightOriginally, all photography was monochrome, or black-and-white. Even after color film was readily available, black-and-white photography continued to dominate for decades, due to its lower cost, chemical stability, and its "classic" photographic look. The tones and contrast between light and dark areas define black-and-white photography.[46] Monochromatic pictures are not necessarily composed of pure blacks, whites, and intermediate shades of gray but can involve shades of one particular hue depending on the process. The cyanotype process, for example, produces an image composed of blue tones. The albumen print process, publicly revealed in 1847, produces brownish tones.Many photographers continue to produce some monochrome images, sometimes because of the established archival permanence of well-processed silver-halide-based materials. Some full-color digital images are processed using a variety of techniques to create black-and-white results, and some manufacturers produce digital cameras that exclusively shoot monochrome. Monochrome printing or electronic display can be used to salvage certain photographs taken in color which are unsatisfactory in their original form; sometimes when presented as black-and-white or single-color-toned images they are found to be more effective. Although color photography has long predominated, monochrome images are still produced, mostly for artistic reasons. Almost all digital cameras have an option to shoot in monochrome, and almost all image editing software can combine or selectively discard RGB color channels to produce a monochrome image from one shot in color.Main article: Color photographyThe first color photograph made by the three-color method suggested by James Clerk Maxwell in 1855, taken in 1861 by Thomas Sutton. The subject is a colored, tartan patterned ribbon.Color photography was explored beginning in the 1840s. Early experiments in color required extremely long exposures (hours or days for camera images) and could not "fix" the photograph to prevent the color from quickly fading when exposed to white light.The first permanent color photograph was taken in 1861 using the three-color-separation principle first published by Scottish physicist James Clerk Maxwell in 1855.[47][48] The foundation of virtually all practical color processes, Maxwell's idea was to take three separate black-and-white photographs through red, green and blue filters.[47][48] This provides the photographer with the three basic channels required to recreate a color image. Transparent prints of the images could be projected through similar color filters and superimposed on the projection screen, an additive method of color reproduction. A color print on paper could be produced by superimposing carbon prints of the three images made in their complementary colors, a subtractive method of color reproduction pioneered by Louis Ducos du Hauron in the late 1860s.Color photography was possible long before Kodachrome, as this 1903 portrait by Sarah Angelina Acland demonstrates, but in its earliest years, the need for special equipment, long exposures, and complicated printing processes made it extremely rare.Russian photographer Sergei Mikhailovich Prokudin-Gorskii made extensive use of this color separation technique, employing a special camera which successively exposed the three color-filtered images on different parts of an oblong plate. Because his exposures were not simultaneous, unsteady subjects exhibited color "fringes" or, if rapidly moving through the scene, appeared as brightly colored ghosts in the resulting projected or printed images.Implementation of color photography was hindered by the limited sensitivity of early photographic materials, which were mostly sensitive to blue, only slightly sensitive to green, and virtually insensitive to red. The discovery of dye sensitization by photochemist Hermann Vogel in 1873 suddenly made it possible to add sensitivity to green, yellow and even red. Improved color sensitizers and ongoing improvements in the overall sensitivity of emulsions steadily reduced the once-prohibitive long exposure times required for color, bringing it ever closer to commercial viability.Autochrome, the first commercially successful color process, was introduced by the Lumire brothers in 1907. Autochrome plates incorporated a mosaic color filter layer made of dyed grains of potato starch, which allowed the three color components to be recorded as adjacent microscopic image fragments. After an Autochrome plate was reversal processed to produce a positive transparency, the starch grains served to illuminate each fragment with the correct color and the tiny colored points blended together in the eye, synthesizing the color of the subject by the additive method. Autochrome plates were one of several varieties of additive color screen plates and films marketed between the 1890s and the 1950s.Kodachrome, the first modern "integral tripack" (or "monopack") color film, was introduced by Kodak in 1935. It captured the three color components in a multi-layer emulsion. One layer was sensitized to record the red-dominated part of the spectrum, another layer recorded only the green part and a third recorded only the blue. Without special film processing, the result would simply be three superimposed black-and-white images, but complementary cyan, magenta, and yellow dye images were created in those layers by adding color couplers during a complex processing procedure.Agfa's similarly structured Agfacolor Neu was introduced in 1936. Unlike Kodachrome, the color couplers in Agfacolor Neu were incorporated into the emulsion layers during manufacture, which greatly simplified the processing. Currently, available color films still employ a multi-layer emulsion and the same principles, most closely resembling Agfa's product.Instant color film, used in a special camera which yielded a unique finished color print only a minute or two after the exposure, was introduced by Polaroid in 1963.Color photography may form images as positive transparencies, which can be used in a slide projector, or as color negatives intended for use in creating positive color enlargements on specially coated paper. The latter is now the most common form of film (non-digital) color photography owing to the introduction of automated photo printing equipment. After a transition period centered around 19952005, color film was relegated to a niche market by inexpensive multi-megapixel digital cameras. Film continues to be the preference of some photographers because of its distinctive "look".Main article: Digital photographySee also: Digital cameraKodak DCS 100, based on a Nikon F3 body with Digital Storage UnitIn 1981, Sony unveiled the first consumer camera to use a charge-coupled device for imaging, eliminating the need for film: the Sony Mavica. While the Mavica saved images to disk, the images were displayed on television, and the camera was not fully digital.The first digital camera to both record and save images in a digital format was the Fujix DS-1P created by Fujifilm in 1988.[49]In 1991, Kodak unveiled the DCS 100, the first commercially available digital single-lens reflex camera. Although its high cost precluded uses other than photojournalism and professional photography, commercial digital photography was born.Digital imaging uses an electronic image sensor to record the image as a set of electronic data rather than as chemical changes on film.[50] An important difference between digital and chemical photography is that chemical photography resists photo manipulation because it involves film and photographic paper, while digital imaging is a highly manipulative medium. This difference allows for a degree of image post-processing that is comparatively difficult in film-based photography and permits different communicative potentials and applications.Photography on a smartphoneDigital photography dominates the 21st century. More than 99% of photographs taken around the world are through digital cameras, increasingly through smartphones.Angles such as vertical, horizontal, or as pictured here diagonal are considered important photographic techniques.A large variety of photographic techniques and media are used in the process of capturing images for photography. These include the camera; dual photography; full-spectrum, ultraviolet and infrared media; light field photography; and other imaging techniques.Main article: CameraThe camera is the image-forming device, and a photographic plate, photographic film or a silicon electronic image sensor is the capture medium. The respective recording medium can be the plate or film itself, or a digital magnetic or electronic memory.[51]Photographers control the camera and lens to "expose" the light recording material to the required amount of light to form a "latent image" (on plate or film) or RAW file (in digital cameras) which, after appropriate processing, is converted to a usable image. Digital cameras use an electronic image sensor based on light-sensitive electronics such as charge-coupled device (CCD) or complementary metaloxidesemiconductor (CMOS) technology. The resulting digital image is stored electronically, but can be reproduced on a paper.The camera (or 'camera obscura') is a dark room or chamber from which, as far as possible, all light is excluded except the light that forms the image. It was discovered and used in the 16th century by painters. The subject being photographed, however, must be illuminated. Cameras can range from small to very large, a whole room that is kept dark while the object to be photographed is in another room where it is properly illuminated. This was common for reproduction photography of flat copy when large film negatives were used (see Process camera).As soon as photographic materials became "fast" (sensitive) enough for taking candid or surreptitious pictures, small "detective" cameras were made, some actually disguised as a book or handbag or pocket watch (the Ticka camera) or even worn hidden behind an Ascot necktie with a tie pin that was really the lens.The movie camera is a type of photographic camera that takes a rapid sequence of photographs on recording medium. In contrast to a still camera, which captures a single snapshot at a time, the movie camera takes a series of images, each called a "frame". This is accomplished through an intermittent mechanism. The frames are later played back in a movie projector at a specific speed, called the "frame rate" (number of frames per second). While viewing, a person's eyes and brain merge the separate pictures to create the illusion of motion.[52]Main article: StereoscopyPhotographs, both monochrome and color, can be captured and displayed through two side-by-side images that emulate human stereoscopic vision. Stereoscopic photography was the first that captured figures in motion.[53] While known colloquially as "3-D" photography, the more accurate term is stereoscopy. Such cameras have long been realized by using film and more recently in digital electronic methods (including cell phone cameras).Main article: DualphotographyAn example of a dualphoto using a smartphone based appDualphotography consists of photographing a scene from both sides of a photographic device at once (e.g. camera for back-to-back dualphotography, or two networked cameras for portal-plane dualphotography). The dualphoto apparatus can be used to simultaneously capture both the subject and the photographer, or both sides of a geographical place at once, thus adding a supplementary narrative layer to that of a single image.[54]Main article: Full spectrum photographyThis image of the rings of Saturn is an example of the application of ultraviolet photography in astronomy.Ultraviolet and infrared films have been available for many decades and employed in a variety of photographic avenues since the 1960s. New technological trends in digital photography have opened a new direction in full spectrum photography, where careful filtering choices across the ultraviolet, visible and infrared lead to new artistic visions.Modified digital cameras can detect some ultraviolet, all of the visible and much of the near infrared spectrum, as most digital imaging sensors are sensitive from about 350nm to 1000nm. An off-the-shelf digital camera contains an infrared hot mirror filter that blocks most of the infrared and a bit of the ultraviolet that would otherwise be detected by the sensor, narrowing the accepted range from about 400nm to 700nm.[55]Replacing a hot mirror or infrared blocking filter with an infrared pass or a wide spectrally transmitting filter allows the camera to detect the wider spectrum light at greater sensitivity. Without the hot-mirror, the red, green and blue (or cyan, yellow and magenta) colored micro-filters placed over the sensor elements pass varying amounts of ultraviolet (blue window) and infrared (primarily red and somewhat lesser the green and blue micro-filters).Uses of full spectrum photography are for fine art photography, geology, forensics and law enforcement.Layering is a photographic composition technique that manipulates the foreground, subject or middle-ground, and background layers in a way that they all work together to tell a story through the image.[56] Layers may be incorporated by altering the focal length, distorting the perspective by positioning the camera in a certain spot.[57] People, movement, light and a variety of objects can be used in layering.[58]See also: Light-field cameraDigital methods of image capture and display processing have enabled the new technology of "light field photography" (also known as synthetic aperture photography). This process allows focusing at various depths of field to be selected after the photograph has been captured.[59] As explained by Michael Faraday in 1846, the "light field" is understood as 5-dimensional, with each point in 3-D space having attributes of two more angles that define the direction of each ray passing through that point.These additional vector attributes can be captured optically through the use of microlenses at each pixel point within the 2-dimensional image sensor. Every pixel of the final image is actually a selection from each sub-array located under each microlens, as identified by a post-image capture focus algorithm.Devices other than cameras can be used to record images. Trichome of Arabidopsis thaliana seen via scanning electron microscope. Note that image has been edited by adding colors to clarify structure or to add an aesthetic effect. Heiti Paves from Tallinn University of Technology.Besides the camera, other methods of forming images with light are available. For instance, a photocopy or xerography machine forms permanent images but uses the transfer of static electrical charges rather than photographic medium, hence the term electrophotography. Photograms are images produced by the shadows of objects cast on the photographic paper, without the use of a camera. Objects can also be placed directly on the glass of an image scanner to produce digital pictures.Amateur photographers take photos for personal use, as a hobby or out of casual interest, rather than as a business or job. The quality of amateur work can be comparable to that of many professionals. Amateurs can fill a gap in subjects or topics that might not otherwise be photographed if they are not commercially useful or salable. Amateur photography grew during the late 19th century due to the popularization of the hand-held camera.[60] Twenty-first century social media and near-ubiquitous camera phones have made photographic and video recording pervasive in everyday life. In the mid-2010s smartphone cameras added numerous automatic assistance features like color management, autofocus face detection and image stabilization that significantly decreased skill and effort needed to take high quality images.[61]This section is in list format but may read better as prose. You can help by converting this section, if appropriate. Editing help is available. (January 2019)Commercial photography is probably best defined as any photography for which the photographer is paid for images rather than works of art. In this light, money could be paid for the subject of the photograph or the photograph itself. The commercial photographic world could include:Advertising photography: There are photographs made to illustrate and usually sell a service or product. These images, such as packshots, are generally done with an advertising agency, design firm or with an in-house corporate design team.Architectural photography focuses on capturing photographs of buildings and architectural structures that are aesthetically pleasing and accurate in terms of representations of their subjects.Event photography focuses on photographing guests and occurrences at mostly social events.Fashion and glamour photography usually incorporates models and is a form of advertising photography. Fashion photography, like the work featured in Harper's Bazaar, emphasizes clothes and other products; glamour emphasizes the model and body form while glamour photography is popular in advertising and men's magazines. Models in glamour photography sometimes work nude.360 product photography displays a series of photos to give the impression of a rotating object. This technique is commonly used by ecommerce websites to help shoppers visualise products.Concert photography focuses on capturing candid images of both the artist or band as well as the atmosphere (including the crowd). Many of these photographers work freelance and are contracted through an artist or their management to cover a specific show. Concert photographs are often used to promote the artist or band in addition to the venue.Crime scene photography consists of photographing scenes of crime such as robberies and murders. A black and white camera or an infrared camera may be used to capture specific details.Still life photography usually depicts inanimate subject matter, typically commonplace objects which may be either natural or man-made. Still life is a broader category for food and some natural photography and can be used for advertising purposes.Real estate photography focuses on the production of photographs showcasing a property that is for sale, such photographs requires the use of wide-lens and extensive knowledge in high-dynamic-range imaging photography.Example of a studio-made food photographFood photography can be used for editorial, packaging or advertising use. Food photography is similar to still life photography but requires some special skills.Photojournalism can be considered a subset of editorial photography. Photographs made in this context are accepted as a documentation of a news story.Paparazzi is a form of photojournalism in which the photographer captures candid images of athletes, celebrities, politicians, and other prominent people.Portrait and wedding photography: Are photographs made and sold directly to the end user of the images.Landscape photography typically captures the presence of nature but can also focus on human-made features or disturbances of landscapes.Wildlife photography demonstrates the life of wild animals.Main article: Art photographyClassic Alfred Stieglitz photograph, The Steerage (1907) shows unique aesthetic of black-and-white photos.During the 20th century, both fine art photography and documentary photography became accepted by the English-speaking art world and the gallery system. In the United States, a handful of photographers, including Alfred Stieglitz, Edward Steichen, John Szarkowski, F. Holland Day, and Edward Weston, spent their lives advocating for photography as a fine art.At first, fine art photographers tried to imitate painting styles. This movement is called Pictorialism, often using soft focus for a dreamy, 'romantic' look. In reaction to that, Weston, Ansel Adams, and others formed the Group f/64 to advocate 'straight photography', the photograph as a (sharply focused) thing in itself and not an imitation of something else.The aesthetics of photography is a matter that continues to be discussed regularly, especially in artistic circles. Many artists argued that photography was the mechanical reproduction of an image. If photography is authentically art, then photography in the context of art would need redefinition, such as determining what component of a photograph makes it beautiful to the viewer. The controversy began with the earliest images "written with light"; Nicphore Nipce, Louis Daguerre, and others among the very earliest photographers were met with acclaim, but some questioned if their work met the definitions and purposes of art.Clive Bell in his classic essay Art states that only "significant form" can distinguish art from what is not art.There must be some one quality without which a work of art cannot exist; possessing which, in the least degree, no work is altogether worthless. What is this quality? What quality is shared by all objects that provoke our aesthetic emotions? What quality is common to Sta. Sophia and the windows at Chartres, Mexican sculpture, a Persian bowl, Chinese carpets, Giotto's frescoes at Padua, and the masterpieces of Poussin, Piero della Francesca, and Cezanne? Only one answer seems possible significant form. In each, lines and colors combined in a particular way, certain forms and relations of forms, stir our aesthetic emotions.[62]On 7 February 2007, Sotheby's London sold the 2001 photograph 99 Cent II Diptychon for an unprecedented $3,346,456 to an anonymous bidder, making it the most expensive at the time.[63]Conceptual photography turns a concept or idea into a photograph. Even though what is depicted in the photographs are real objects, the subject is strictly abstract.Josef H. Neumann: Gustav I (1976)In parallel to this development, the then largely separate interface between painting and photography was closed in the second half of the 20th century with the chemigram of Pierre Cordier and the chemogram of Josef H. Neumann.[64] In 1974 the chemograms by Josef H. Neumann concluded the separation of the painterly background and the photographic layer by showing the picture elements in a symbiosis that had never existed before, as an unmistakable unique specimen, in a simultaneous painterly and at the same time real photographic perspective, using lenses, within a photographic layer, united in colors and shapes. This Neumann chemogram from the 1970s thus differs from the beginning of the previously created cameraless chemigrams of a Pierre Cordier and the photogram Man Ray or Lszl Moholy-Nagy of the previous decades. These works of art were almost simultaneous with the invention of photography by various important artists who characterized Hippolyte Bayard, Thomas Wedgwood, William Henry Fox Talbot in their early stages, and later Man Ray and Lszl Moholy-Nagy in the twenties and by the painter in the thirties Edmund Kesting and Christian Schad by draping objects directly onto appropriately sensitized photo paper and using a light source without a camera.[65]National Guardsman in Washington D.C. in 2021Main article: PhotojournalismPhotojournalism is a particular form of photography (the collecting, editing, and presenting of news material for publication or broadcast) that employs images in order to tell a news story. It is now usually understood to refer only to still images, but in some cases the term also refers to video used in broadcast journalism. Photojournalism is distinguished from other close branches of photography (e.g., documentary photography, social documentary photography, street photography or celebrity photography) by complying with a rigid ethical framework which demands that the work be both honest and impartial whilst telling the story in strictly journalistic terms. Photojournalists create pictures that contribute to the news media, and help communities connect with one other. Photojournalists must be well informed and knowledgeable about events happening right outside their door. They deliver news in a creative format that is not only informative, but also entertaining, including sports photography.Further information: Forensic photographyWootton bridge collapse in 1861The camera has a long and distinguished history as a means of recording scientific phenomena from the first use by Daguerre and Fox-Talbot, such as astronomical events (eclipses for example), small creatures and plants when the camera was attached to the eyepiece of microscopes (in photomicroscopy) and for macro photography of larger specimens. The camera also proved useful in recording crime scenes and the scenes of accidents, such as the Wootton bridge collapse in 1861. The methods used in analysing photographs for use in legal cases are collectively known as forensic photography. Crime scene photos are usually taken from three vantage points: overview, mid-range, and close-up.[66]In 1845 Francis Ronalds, the Honorary Director of the Kew Observatory, invented the first successful camera to make continuous recordings of meteorological and geomagnetic parameters. Different machines produced 12- or 24- hour photographic traces of the minute-by-minute variations of atmospheric pressure, temperature, humidity, atmospheric electricity, and the three components of geomagnetic forces. The cameras were supplied to numerous observatories around the world and some remained in use until well into the 20th century.[67][68] Charles Brooke a little later developed similar instruments for the Greenwich Observatory.[69]Science regularly uses image technology that has derived from the design of the pinhole camera to avoid distortions that can be caused by lenses. X-ray machines are similar in design to pinhole cameras, with high-grade filters and laser radiation.[70]Photography has become universal in recording events and data in science and engineering, and at crime scenes or accident scenes. The method has been much extended by using other wavelengths, such as infrared photography and ultraviolet photography, as well as spectroscopy. Those methods were first used in the Victorian era and improved much further since that time.[71]The first photographed atom was discovered in 2012 by physicists at Griffith University, Australia. They used an electric field to trap an "Ion" of the element, Ytterbium. The image was recorded on a CCD, an electronic photographic film.[72]Main article: Wildlife photographyMute swans and their cygnets photographed on Wolvercote lakesWildlife photography involves capturing images of various forms of wildlife. Unlike other forms of photography such as product or food photography, successful wildlife photography requires a photographer to choose the right place and right time when specific wildlife are present and active. It often requires great patience and considerable skill and command of the right photographic equipment.[73]Photography may be used both to capture reality and to produce a work of art. While photo manipulation was often frowned upon at first, it was eventually used to great extent to produce artistic effects. Nude composition 19 from 1988 by Jaan Knnap.The Muse de l'lyse, founded in 1985 in Lausanne, was the first photography museum in Europe.There are many ongoing questions about different aspects of photography. In her On Photography (1977), Susan Sontag dismisses the objectivity of photography. This is a highly debated subject within the photographic community.[74] Sontag argues, "To photograph is to appropriate the thing photographed. It means putting one's self into a certain relation to the world that feels like knowledge, and therefore like power."[75] Photographers decide what to take a photo of, what elements to exclude and what angle to frame the photo, and these factors may reflect a particular socio-historical context. Along these lines, it can be argued that photography is a subjective form of representation.Modern photography has raised a number of concerns on its effect on society. In Alfred Hitchcock's Rear Window (1954), the camera is presented as promoting voyeurism. 'Although the camera is an observation station, the act of photographing is more than passive observing'.[75]The camera doesn't rape or even possess, though it may presume, intrude, trespass, distort, exploit, and, at the farthest reach of metaphor, assassinate all activities that, unlike the sexual push and shove, can be conducted from a distance, and with some detachment.[75]Digital imaging has raised ethical concerns because of the ease of manipulating digital photographs in post-processing. Many photojournalists have declared they will not crop their pictures or are forbidden from combining elements of multiple photos to make "photomontages", passing them as "real" photographs. Today's technology has made image editing relatively simple for even the novice photographer. However, recent changes of in-camera processing allow digital fingerprinting of photos to detect tampering for purposes of forensic photography.Photography is one of the new media forms that changes perception and changes the structure of society.[76] Further unease has been caused around cameras in regards to desensitization. Fears that disturbing or explicit images are widely accessible to children and society at large have been raised. Particularly, photos of war and pornography are causing a stir. Sontag is concerned that "to photograph is to turn people into objects that can be symbolically possessed". Desensitization discussion goes hand in hand with debates about censored images. Sontag writes of her concern that the ability to censor pictures means the photographer has the ability to construct reality.[75]One of the practices through which photography constitutes society is tourism. Tourism and photography combine to create a "tourist gaze"[77]in which local inhabitants are positioned and defined by the camera lens. However, it has also been argued that there exists a "reverse gaze"[78] through which indigenous photographees can position the tourist photographer as a shallow consumer of images.Main article: Photography and the lawPhotography is both restricted and protected by the law in many jurisdictions. Protection of photographs is typically achieved through the granting of copyright or moral rights to the photographer. In the United States, photography is protected as a First Amendment right and anyone is free to photograph anything seen in public spaces as long as it is in plain view.[79] In the UK, a recent law (Counter-Terrorism Act 2008) increases the power of the police to prevent people, even press photographers, from taking pictures in public places.[80] In South Africa, any person may photograph any other person, without their permission, in public spaces and the only specific restriction placed on what may not be photographed by government is related to anything classed as national security. Each country has different laws.Outline of photographyScience of photographyList of photographersList of photography awardsList of most expensive photographsList of photographs considered the most importantAstrophotographyImage editingImagingPhotolab and minilabVisual artsLarge formatMedium formatMicroform^ Spencer, D A (1973). The Focal Dictionary of Photographic Technologies. Focal Press. p.454. ISBN978-0-13-322719-2.^ Archived 25 May 2013 at the Wayback Machine, Henry George Liddell, Robert Scott, A Greek-English Lexicon, on Perseus^ "Henry George Liddell, Robert Scott, A Greek-English Lexicon, ^-". www.perseus.tufts.edu. Retrieved 1 March 2024.^ Harper, Douglas. "photograph". Online Etymology Dictionary.^ Boris Kossoy (2004). Hercule Florence: El descubrimiento de la fotografa en Brasil. Instituto Nacional de Antropologa e Historia. ISBN978-968-03-0020-4. Archived from the original on 28 April 2016. Retrieved 13 December 2015.^ Kossoy, Boris (1980). Hercule Florence: a descoberta isolada da fotografia no Brasil. So Paulo: Duas Cidades. ISBN9788531409448.{{cite book}}: CS1 maint: publisher location (link)^ "Who First Used the Word Photography?". Photophys. 28 March 2015. Archived from the original on 18 January 2017. Retrieved 25 June 2019.^ Mathur, P.; Mathur, K.; Mathur, S. (6 March 2014). Developments and Changes in Science Based Technologies. Partridge Publishing. p.50. 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The invention of the camera can be traced back to the 10th century when the Arab scientist Al-Hasan Ibn al-Haytham alias Alhacen provided the first clear description and correct analysis of the (human) vision process. Although the effects of single light passing through the pinhole have already been described by the Chinese Mozi (Lat. Micius) (5th century B), the Greek Aristotle (4th century BC), and the Arab^ Wade, Nicholas J.; Finger, Stanley (2001), "The eye as an optical instrument: from camera obscura to Helmholtz's perspective", Perception, 30 (10): 11571177, doi:10.1068/p3210, PMID11721819, S2CID8185797, The principles of the camera obscura first began to be correctly analysed in the eleventh century, when they were outlined by Ibn al-Haytham.^ Needham, Joseph. Science and Civilization in China, vol. IV, part 1: Physics and Physical Technology (PDF). p.98. Archived from the original (PDF) on 3 July 2017. Retrieved 5 September 2016. Alhazen used the camera obscura particularly for observing solar eclipses, as indeed Aristotle is said to have done, and it seems that, like Shen Kua, he had predecessors in its study, since he did not claim it as any new finding of his own. But his treatment of it was competently geometrical and quantitative for the first time.^ "Who Invented Camera Obscura?". Photography History Facts. All these scientists experimented with a small hole and light but none of them suggested that a screen is used so an image from one side of a hole in surface could be projected at the screen on the other. First one to do so was Alhazen (also known as Ibn al-Haytham) in 11th century.^ Needham, Joseph. Science and Civilization in China, vol. IV, part 1: Physics and Physical Technology (PDF). p.99. Archived from the original (PDF) on 3 July 2017. Retrieved 5 September 2016. The genius of Shen Kua's insight into the relation of focal point and pinhole can better be appreciated when we read in Singer that this was first understood in Europe by Leonardo da Vinci (+ 1452 to + 1519), almost five hundred years later. A diagram showing the relation occurs in the Codice Atlantico, Leonardo thought that the lens of the eye reversed the pinhole effect, so that the image did not appear inverted on the retina; though in fact it does. Actually, the analogy of focal-point and pin-point must have been understood by Ibn al-Haitham, who died just about the time when Shen Kua was born.^ Davidson, Michael W (13 November 2015). "Albertus Magnus". Molecular Expressions: Science, Optics and You. National High Magnetic Field Laboratory at The Florida State University. Archived from the original on 22 December 2015.^ Potonnie, Georges (1973). The history of the discovery of photography. Arno Press. p. 50. ISBN0-405-04929-3^ a b Gernsheim, Helmut (1986). 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In Appendix A (pp. 217227), Litchfield evaluates assertions that Schulze's experiments should be called photography and includes a complete English translation (from the original Latin) of Schulze's 1719 account of them as reprinted in 1727.^ Werge, John (1 December 1894). "The Oldest Photograph". The Newcastle Weekly Chronicle. p.10.^ Litchfield, R. 1903. "Tom Wedgwood, the First Photographer: An Account of His Life." London, Duckworth and Co. See Chapter XIII. Includes the complete text of Humphry Davy's 1802 paper, which is the only known contemporary record of Wedgwood's experiments. (Retrieved 7 May 2013 via archive.org Archived 7 October 2015 at the Wayback Machine).^ a b "The First Photograph Heliography". Archived from the original on 6 October 2009. Retrieved 29 September 2009. from Helmut Gernsheim's article, "The 150th Anniversary of Photography," in History of Photography, Vol. I, No. 1, January 1977: ...In 1822, Nipce coated a glass plate... The sunlight passing through... This first permanent example... was destroyed... some years later.^ a b "1837: Die Erfindung der Fotografie in Mnchen". www.deutsches-museum.de. 28 May 2024.^ Hirsch, Robert (1999). Seizing the light: a history of photography. McGraw-Hill. ISBN978-0-697-14361-7. Archived from the original on 29 April 2016. Retrieved 13 December 2015.^ "Hercule Florence". Google Arts and Culture (in Brazilian Portuguese). Retrieved 17 April 2024.^ "Hercule Florence". Instituto Moreira Salles (in Brazilian Portuguese). Retrieved 17 April 2024.^ "Hercule Florence". Google Arts and Culture (in Brazilian Portuguese). Retrieved 17 April 2024.^ Boris Kossoy (2004). Hercule Florence: El descubrimiento de la fotografa en Brasil. Instituto Nacional de Antropologa e Historia. ISBN968-03-0020-X. Archived from the original on 2 July 2023. Retrieved 4 November 2016.^ a b Chisholm, Hugh, ed. (1911). "Photography". Encyclopdia Britannica. Vol.21 (11thed.). 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As a beginner in photography, you will hear lots of Photography terminology that sounds like theyve come straight from a sci-fi novel. Well, fear not my learner friends, here we bring you the A-Z of photography terminology.Our free downloadable guide is here to help the beginner photographer learn easier by explaining all the photography terminology. From Aperture to Zoom Lens here youll get all the camera terms explained and whats more, its totally free! Get access to ALL our online courses 1000s of videos, worksheets, critiques of students work, personalised support and much more with our monthly membership. Aperture - Aperture is the opening through which light passes through the lens to enter the camera. Its size can be modified to control how much light reaches the sensor or negative film. The diameter of the aperture, also known as the F-stop, affects the exposure and depth of field.Aspect ratio - Aspect ratio defines the relationship between an images lengths, represented as width: height. It is predetermined by the dimensions of the cameras sensor but can be altered in post-processing. The most common aspect ratios are 3:2 (full-frame, mirrorless, 35mm film) and 4:3 (most DSLRs). APS-C - The APS-C Sensor is smaller than a full-frame sensor but larger than whats found in point-and-shoot cameras or smartphones. Typically, its around 22mm x 15mm in size. Its often more affordable than cameras with full frame sensors but has a crop factor typically around 1.5x or 1.6x. If you want to know all about APS-c VS Full Frame cameras check out our blog. Aperture priority mode (A/AV) - In this mode, the photographer sets the desired aperture value (f-stop), while the camera automatically adjusts the shutter speed to achieve the proper exposure based on the chosen aperture setting and the camera's metering system.Autofocus - Autofocus (AF) is a feature found in most modern cameras, both digital and film, that automatically adjusts the focus of the camera's lens to ensure sharp and clear images. Instead of manually turning the focus ring on the lens to achieve focus, autofocus systems use various techniques to detect and lock onto the subject, making photography more convenient and accessible to users.Auto mode - In auto mode, the camera takes control of various exposure parameters such as aperture, shutter speed, ISO sensitivity, white balance, and sometimes even focus, to produce a properly exposed image.Adjustment Layer - An adjustment layer is a non-destructive editing tool commonly used in image editing software like Adobe Photoshop. It allows you to apply various adjustments and effects to an image without directly modifying the original pixel data. Instead, the adjustments are applied as separate layers on top of the image layer, allowing for flexibility and control over the editing process.Analogue - Analogue photography is another way to describe Film photography non-digital photographic processes. Angle of view - It represents the angular extent of the scene visible through the lens, from one side to the other, as perceived by the camera.Analogue Colours - The analogue colours are Cyan, Magenta, Yellow and Key (black). By combining different percentages of cyan, magenta, yellow, and black in printing, a wide range of colours can be reproduced. This CMYK colour mixing process is subtractive, meaning that the colours subtract light as they are mixed, unlike the additive colour model used in digital displays, where colours are combined by adding light (such as in RGB, which stands for Red, Green, Blue). CMYK is the standard colour model used in most colour printing processes, including offset printing, digital printing, and commercial printing. Abstract Photography - Abstract generally is a style that doesn't attempt to represent an accurate depiction of visual reality. Instead, Abstract Photography uses shapes, forms, colours, and gestural marks to achieve its effect, often departing from recognizable imagery.Ambient Light - Ambient light is the existing or available light in a scene that is not produced by any artificial light sources such as flashes or studio lights. It is also sometimes referred to as natural light, though it can include both natural outdoor light and indoor light from sources like windows, lamps, or overhead lighting.Aerial Photography - Aerial photography is capturing photographs of the earth's surface from an elevated perspective, typically from an aircraft, drone, or satellite. This elevated vantage point allows photographers to capture sweeping vistas, landscapes, urban areas, and other subjects that are not easily accessible from the ground. Aerial photography is used for various purposes, including cartography, urban planning, environmental monitoring, archaeology, filmmaking, and artistic expression.Artefacts - Artefacts are undesired or unintended visual anomalies or distortions that appear in an image due to various factors such as equipment limitations, technical errors, or image processing.Album - An album is a way to present photography in a printed manner.Architecture Photography - Architecture Photography is a specialized genre of photography focused on capturing images of buildings, structures, and architectural spaces. It aims to showcase architectural subjects' design, aesthetics, and spatial qualities while highlighting their form, function, and context.Action Photography - Action photography is a genre of photography focused on capturing dynamic and fast-paced subjects or activities in motion. It involves freezing or capturing the movement of subjects such as athletes, wildlife, vehicles, dancers, or any other moving objects, often in challenging or unpredictable conditions.Archiving - Archiving is organizing, storing, and preserving photographs and related materials for long-term access and preservation. Archiving ensures that photographs are properly managed, protected from damage or deterioration, and accessible for future generations to study, enjoy, and appreciate.Auto White Balance - A feature found in digital cameras that automatically adjusts the colour balance of an image to represent white tones under different lighting conditions accurately. White balance is crucial in photography because different light sources, such as daylight, tungsten bulbs, fluorescent lights, or candlelight, have different colour temperatures, which can result in images with unnatural or off-colour casts if not properly adjusted.Adapter - A device or accessory used to connect or attach camera equipment, accessories, or lenses that are not directly compatible with each other due to differences in mount types, thread sizes, or other specifications. Adapters enable photographers to expand the compatibility and versatility of their camera gear, allowing them to use lenses, filters, or accessories from different manufacturers or systems.Albumen Print - An albumen print is a type of photographic print made using the albumen (egg white) of a chicken egg as the binding agent for light-sensitive photographic chemicals. Albumen prints were one of the most popular photographic processes in the 19th century, particularly during the mid-to-late 1800s, and were widely used for producing photographic prints from glass plate negatives.Ambrotype - An ambrotype is a type of early photographic process popular in the mid-19th century, primarily during the 1850s and 1860s. It involves creating a positive photographic image on a glass plate coated with a light-sensitive emulsion. Ambrotypes were primarily used for producing one-of-a-kind portrait photographs, although they could also be used for other types of subjects.Astrophotography - Astrophotography is a specialized genre of photography that focuses on capturing images of celestial objects and astronomical phenomena, including stars, planets, galaxies, nebulae, and other celestial bodies. Caught the bug for capturing the stars? Check out our Astrophotography Course with Ben Bush! Blue hour - Blue hour is the short period of time before sunrise or after sunset when the sun is just below the horizon. Indirect sunlight is evenly diffused and takes on a blue shade. The duration on the blue hour varies depending on the location, but generally lasts less than an hour.Bokeh - Bokeh is an optical phenomenon that makes bright out-of-focus elements aesthetically pleasing. Using a fast lens at its wider aperture turns a busy background into a blurred, homogenic canvas where light appears as soft shapes. The form of these points of lights is determined by the number of blades in the diaphragm the higher the number, the more circular these elements will appear. To learn about creating bokeh in your own photography, check out our tutorial! Bracketing - Bracketing is the action of capturing the same shot using different exposure values to make sure the whole scene is exposed properly. Bracketing can be done manually or using the auto exposure bracketing (AEB) function. In most cameras, AEB allows photographers to select the exposure compensation for the additional shots, which are taken automatically as you press the shutter release. For most compositions, a 1/3 exposure compensation is the way to go.Bulb - Bulb is a camera setting that holds the shutter open for as long as the shutter release button is pressed. In some cases, the shutter release needs to be pressed once to open the shutter and once to close it, rather than remaining pushed down. This mode allows photographers to capture longer exposures than the ones offered by the camera (usually up to 30). Looking to finesse your Long Exposure photography? Check out our course!Burst rate - Burst rate is the number of consecutive shots a camera can take in continuous shooting mode. When using this mode, images are stored in a high-speed buffer memory before being transferred to the memory card. Once the buffer is full, the camera will reduce the FPS to give it enough time to free space. Burst rate can be affected by image formats, as it depends on the file size, as well as by the speed of the memory card used.Bridge Camera - A bridge camera is a type of digital camera that bridges the gap between point-and-shoot cameras and DSLRs. It typically features a fixed lens with a versatile zoom range, manual controls for exposure settings, and advanced features such as image stabilization and electronic viewfinders.Buffer - A temporary storage area in a digital camera's memory where images are held before being written to the memory card. A larger buffer allows the camera to capture a series of images in rapid succession without waiting for the previous images to be fully processed and written to the memory card.Bleach - In traditional film photography, bleach is a chemical solution used in the bleaching step of the colour development process. Bleach removes the metallic silver from the developed film or print, leaving behind a transparent image with only the dye colours remaining.Burn - Burning is a darkroom technique used in film photography to selectively increase the exposure of specific areas of a print. By exposing certain areas of the print to additional light during printing, the photographer can darken or intensify those areas to adjust the overall contrast and tonal balance of the image.Backlighting - Backlighting refers to the technique of positioning the main source of light behind the subject, illuminating the subject from the rear. Backlighting can create a dramatic silhouette effect, highlight the contours of the subject, or produce a halo-like glow around the edges.Brightness - The perceived intensity of light in an image. In photography, brightness can be adjusted using exposure settings such as aperture, shutter speed, and ISO sensitivity, as well as post-processing techniques such as brightness/contrast adjustments.Background - The area behind the main subject of the image. The background plays a crucial role in composition and can either complement or detract from the subject, depending on factors such as depth of field, lighting, and framing.Balance - The distribution of visual elements within an image to create a sense of harmony and equilibrium. Balance can be achieved through careful composition, symmetry, and the arrangement of contrasting elements such as light and dark, colour, and texture.Black and white - Black and white photography is a style of photography that captures images using only shades of grey, ranging from pure black to pure white, without colour. Black and white photography emphasizes form, texture, and contrast, and can evoke a timeless and nostalgic mood. Want to learn how to make great black-and-white photographs? Watch our tutorial!Blur - An aesthetic effect of rendering parts of an image out of focus or softened. Blur can be intentional, such as creating a shallow depth of field to isolate the subject, or unintentional, resulting from camera shake, motion blur, or a slow shutter speed.Bracketed Exposure - Bracketed exposure is a technique used to capture multiple exposures of the same scene at different exposure settings, typically varying the aperture, shutter speed, or ISO sensitivity. Bracketing ensures that at least one exposure captures the optimal exposure for the scene, especially in situations with challenging lighting conditions.Battery Grip - An accessory that attaches to the bottom of a camera body, providing additional battery capacity and a vertical shutter release button for shooting in portrait orientation. Battery grips are commonly used in DSLR cameras to extend shooting time and improve handling.Back Button Focus - Back button focus is a focusing technique that separates the autofocus function from the shutter release button on a camera. By assigning autofocus to a dedicated button on the back of the camera, photographers can control focus independently of shutter release, allowing for greater control over focus tracking and composition.Bounce Flash - Where the flash unit is aimed at a reflective surface, such as a ceiling or wall, rather than directly at the subject. Bounce flash produces softer, more diffused lighting and reduces harsh shadows and reflections on the subject.Beauty Dish - A type of lighting modifier used to create soft, flattering light for portrait photography. It typically consists of a shallow dish-shaped reflector with a central light source, designed to produce even, diffused light with a subtle wrapping effect on the subject's face.Barn Doors - A type of adjustable light modifier used to control the direction and spread of light from a studio strobe or continuous light source. Barn doors consist of adjustable flaps or panels attached to the front of the light source, allowing photographers to shape and direct the light as desired. Candid a shot taken of someone who wasnt expecting it or who wasnt posing. Common in street or documentary photography.Chromatic Aberration the effect caused by the refraction of different wavelengths of light. Seen in an image via coloured lines (usually green or purple) on edges of objects such as rocks or buildings. Composite - A composite is a picture created by combining multiple images into a single one. The most common uses of this practice include removing unwanted elements, creating surreal images, and generating time-lapse style compositions. To create a composite photo, photographers usually layer the images one on top of the another and mask out the undesirable partsComposition the word composition means combining or 'putting together parts to form a whole. In photography, composition is how you arrange the elements of your scene within your frame. You have rules of composition such as the rule of thirds. Click here to see a video on how to use composition to improve portraiture.Contrast the difference between the dark and light areas of an image. Higher contrast images have darker shadows and brighter highlights whereas low contrast images will have less definition between the lights and darks.Crop factor this is the size of a camera sensor proportionate to a 35mm sensor, sometimes called a full-frame sensor. The 35mm full frame sensor is based on the old 35mm film size. Crop sensors are a cropped version of this. Common crop sensors are APS-C and micro 4/3. The crop factor of your sensor is to do with the effect of the focal length equivalent on a full frame camera. E.g. an APS-C sensor has a crop factor of x1.6. This means if you multiply the focal length on a APS-C camera by 1.6 you will get the equivalent focal length on a full frame camera. For a more info on this click here for our Sensor Sizes Explained video. Compact camera - Also known as a point-and-shoot camera, is a small and lightweight digital camera designed for easy and convenient use. Compact cameras typically feature automatic exposure modes, built-in lenses, and simplified controls, making them suitable for casual photography and everyday use.Crop - Cropping refers to the process of removing unwanted parts of an image by selecting and trimming a portion of the frame. Cropping can be used to improve composition, eliminate distractions, or change the aspect ratio of an image. Digital image editing software allows photographers to crop images non-destructively, preserving the original file while applying the desired crop.Close-up - Close-up photography involves capturing images of subjects at close range, emphasizing fine details, textures, and patterns. Close-up photography is often used to photograph small objects, macro subjects, or intimate portraits, allowing viewers to see details that may not be visible to the naked eye.Continuous Shooting Also known as burst mode, is a feature found in digital cameras that allows photographers to capture a rapid sequence of images in quick succession by holding down the shutter button. Continuous shooting is useful for capturing fast-moving subjects, action shots, or moments that require precise timing.Cyan - Cyan is one of the primary colours in the subtractive colour model, along with magenta and yellow. In photography, cyan is commonly used in colour printing and reproduction processes to create a range of blue-green hues in images. Cyan is also one of the colour channels in digital image editing, representing the blue-green colour range.Clarity - In digital image editing, the clarity adjustment enhances mid-tone contrast and edge definition, resulting in a crisper and more defined appearance. Increasing clarity can help bring out texture and detail in images, while reducing clarity can create a softer and more diffused effect.Curves - Curves is a tool found in digital image editing software, such as Adobe Photoshop or Lightroom, that allows photographers to adjust the tonal range and contrast of an image by manipulating the brightness and contrast curve. By adjusting the curve, photographers can fine-tune the highlights, shadows, and mid-tones to achieve the desired tonal balance and contrast in the image. Become a curves MASTER with our free photoshop tutorial!Capture One - Capture One is a professional-grade photo editing and raw conversion software developed by Phase One. It is widely used by professional photographers and studios for tethered shooting, raw processing, colour grading, and image editing. Capture One offers advanced features for precise control over colour, exposure, and detail, making it a popular choice for commercial and studio photography.Contrast Ratio - Contrast ratio is a measure of the difference in brightness between the darkest and lightest parts of an image. In photography, contrast ratio is an important consideration for achieving optimal exposure and dynamic range. High-contrast images have a greater difference between highlights and shadows, while low-contrast images have a more subdued tonal range.Colour Space - A colour space, also known as a colour model or colour gamut, is a mathematical model that defines a range of colours that can be represented in an image. Common colour spaces in photography include sRGB, Adobe RGB, and ProPhoto RGB, each with different gamuts and capabilities for representing colours. Choosing the appropriate colour space is important for ensuring accurate colour reproduction and compatibility across different devices and platforms.Centre Weighted Metering - Centre-weighted metering gives priority to the exposure value of the central portion of the frame, making it suitable for subjects located in the centre of the composition.Calibration - Calibration refers to the process of adjusting and aligning the settings or parameters of a camera, monitor, printer, or other imaging device to ensure accurate and consistent colour reproduction and performance. Calibration is essential for maintaining colour accuracy and consistency across different devices and workflows, particularly in professional photography and printing environments.Chroma Key - Chroma key, also known as green screen or blue screen, is a technique used in photography and video production to composite or replace the background of an image or video with a different scene or visual element. By filming the subject against a solid-coloured background (usually green or blue), filmmakers and photographers can easily remove the background and replace it with a digitally generated or prerecorded background during post-production. To find out more about shooting on a green screen, check out our full tutorial here.Card Reader - A card reader is a device used to transfer digital files, such as photographs or videos, from a memory card to a computer or other storage device. Card readers typically have slots or ports that support various types of memory cards, such as SD cards, CF cards, or microSD cards, allowing for fast and efficient file transfer without the need for connecting the camera directly to the computer.Contact Sheet - A contact sheet is a photographic print or digital image that displays thumbnail-sized previews of multiple images on a single sheet or screen. Contact sheets are commonly used by photographers to review and select images from a photo shoot, providing a quick overview of the entire set of images for evaluation and organization.Contact Print - A photographic print made by placing a negative directly in contact with photosensitive paper and exposing it to light. Contact prints produce positive images that are the same size as the original negative, providing an accurate representation of the captured image with minimal enlargement or distortion.C41- C41 is a colour-negative film-developing process used in traditional film photography. The C41 process involves developing colour negative films in a series of chemical baths to produce a set of colour negatives that can be printed or scanned to create colour prints or digital images. C41 is widely used for processing colour-negative films in commercial labs and photo printing services.Cyanotype - A photographic printing process that produces cyan-blue images on a white or light-coloured background. Cyanotype prints are created by coating paper or other surfaces with a light-sensitive solution containing ferric ammonium citrate and potassium ferricyanide, then exposing the treated surface to UV light to create a chemical reaction that forms a cyan-blue image.Curate - The process of selecting, organizing, and presenting images for exhibition, publication, or portfolio purposes. Curating involves evaluating and editing a collection of images to create a cohesive and compelling narrative or visual story, considering factors such as composition, theme, style, and context.Clipping - The loss of detail or information in the highlights or shadows of an image due to overexposure or underexposure. Highlight clipping occurs when bright areas of the image are so overexposed that they become pure white and lose texture and detail. Shadow clipping occurs when dark areas of the image are so underexposed that they become pure black and lose detail and definition.Clipping Mask - An editing technique used to apply a layer mask to an image or adjustment layer, restricting the visibility of the layer to the shape of another layer or object. Clipping masks are commonly used to apply adjustments, effects, or textures to specific areas of an image without affecting the entire image.Catchlight - The reflection of light sources, such as natural or artificial light, in a subject's eyes. Catchlights add depth, sparkle, and dimension to the eyes, making them appear more alive and engaging in portraits and close-up photography. Photographers often use catchlights strategically to enhance the attractiveness and expressiveness of their subjects. Depth of Field the distance around your focus point (in front and behind) that is sharp. A long DOF will show everything sharp from the foreground to the background. A shallow DOF will show only a small part of the picture sharp with the foreground and background being blurry.Diaphragm - Diaphragm is the mechanical device inside a camera lens that controls the aperture. Modern DSLR cameras use what is known as an iris diaphragm, which is made of overlapping blades that can be modified to increase or decrease the size of the aperture.Drive Mode - Also known as shooting mode, refers to the setting on a camera that determines how multiple shots are taken in succession when the shutter button is pressed. Common drive modes include single-shot mode (capturing one image per shutter press), continuous shooting mode (capturing a rapid sequence of images), self-timer mode (delaying the shutter release for a specified time), and interval timer mode (capturing images at set intervals).DSLR Digital Single Lens Reflex Camera. Popular camera type for learners of photography and professionals. Lenses can be changed and the manual settings can easily be adjusted. Find out about the best beginner DSLRs here.Dynamic Range range of luminosity and colour depth in an image, between the highest and lowest intensities. An image with a higher dynamic range will have more detail in the lights, darks and colours.DNG - stands for Digital Negative. This is a standard format for a Raw file and will work on all image manipulation programs that process Raw files. Click here to find out the what, why and should you convert to DNG.Developer - Developer is a chemical solution used in traditional film photography to convert the latent image on exposed film or photographic paper into a visible image. The developer solution reacts with light-sensitive silver halide crystals to reduce them to metallic silver, forming the final image.Darkroom - A darkroom is a controlled environment used in traditional film photography for processing, developing, and printing photographic images. Darkrooms are typically light-tight rooms or enclosures equipped with photographic enlargers, trays, and other equipment for handling and processing light-sensitive materials.Digital - The process of capturing, storing, and processing images using digital technology, such as digital cameras, memory cards, and computers. Unlike traditional film photography, which relies on chemical processes to capture and develop images, digital photography uses electronic sensors to record and digitize light information, allowing for instant image preview, storage, and manipulation.Diffuser - A diffuser is a translucent material or accessory used to soften and diffuse harsh light sources in photography. Diffusers scatter and spread light rays, reducing contrast and eliminating harsh shadows to create a softer and more flattering lighting effect for portraits, close-up photography, and other applications.Dodge - Dodging is a darkroom technique used in traditional film photography to selectively lighten or reduce the exposure of specific areas of a photographic print during the printing process. By shielding parts of the print from light during exposure, photographers can lighten shadows, reduce contrast, and emphasize highlights to adjust the overall tonal balance of the image.Diptych - A photographic composition consisting of two images displayed side by side or hinged together as a pair. Diptychs are often used to create visual narratives, comparisons, or juxtapositions between two related or contrasting subjects, themes, or moments.Digital Asset Management - Digital Asset Management (DAM) refers to the organization, storage, and retrieval of digital files, including photographs, videos, and other media assets. DAM systems and software help photographers and organizations manage and catalogue their digital assets, including metadata, keywords, and file formats, for efficient search, retrieval, and distribution.Documentary Photography - Documentary photography is a genre of photography that focuses on capturing real-life events, people, and social issues in a candid and unobtrusive manner. Documentary photographers aim to tell stories, raise awareness, and document historical or cultural events through visual storytelling and journalistic principles.Drone Photography - Drone photography, also known as aerial photography, is the practice of capturing images from unmanned aerial vehicles (drones) equipped with cameras. Drone photography offers unique perspectives and aerial views of landscapes, cityscapes, and events, allowing photographers to capture stunning aerial images and videos from above.Direct light - Direct light refers to light that travels directly from the light source to the subject without being diffused or scattered by intervening objects or materials. Direct light produces harsh shadows, strong contrasts, and well-defined highlights, making it suitable for creating dramatic lighting effects in photography.Digital Zoom - Digital zoom is a feature found in digital cameras and smartphones that magnifies the central portion of an image electronically, simulating the effect of zooming in without changing the focal length of the lens. Unlike optical zoom, which magnifies the image optically by adjusting the lens position, digital zoom enlarges the image digitally, resulting in reduced image quality and resolution.Direct Positive - Also known as positive-to-positive or reversal process, is a photographic printing method that produces positive images directly from a positive or transparency film. Unlike traditional negative-to-positive printing, which involves creating a negative image first, direct positive printing eliminates the need for an intermediate negative, resulting in positive images with rich, vibrant colours and high contrast.Daguerreotype - Daguerreotype is an early photographic process invented by Louis Daguerre in the 1830s, which produced one-of-a-kind images on polished silver-plated copper plates. Daguerreotypes are characterized by their sharp detail, mirror-like surface, and unique aesthetic qualities, making them highly valued as historical artefacts and collectables.Denoise - A digital image processing technique used to reduce or remove noise, artefacts, and unwanted graininess from digital photographs. Denoising algorithms analyse the image data and selectively smooth out noise patterns while preserving fine details and image quality, resulting in cleaner, more visually pleasing images.Dynamic range - Dynamic range is the range of luminance of an image between its highest and lowest light intensities, usually pure white and pure black. The dynamic range of a digital sensor is slightly narrower than that of film photography, and both are significantly limited in comparison to what the human eye can perceive. Scenes with a wider dynamic range than that of the camera sensor will result in images that are either overexposed or underexposed. Exposure amount of light you expose your sensor or film to. Determined by the aperture and shutter speed.Exposure Compensation feature on most cameras that allows you to increase or decrease the exposure in manual modes. Electronic Viewfinder - A digital display used in some digital cameras to provide a real-time preview of the scene being photographed. Unlike optical viewfinders found in DSLR cameras, EVFs use electronic sensors and displays to simulate the view through the camera lens, allowing photographers to preview exposure, focus, and composition adjustments before capturing an image.Equivalent focal length - A term used to describe the effective focal length of a lens when used on a camera with a sensor size different from its native format. Equivalent focal length considers the crop factor or sensor size difference between cameras to provide a comparison of the angle of view produced by the lens on different camera systems.Enlarger - An enlarger is a photographic device used in traditional darkroom printing to project and magnify the image from a negative onto light-sensitive photographic paper. Enlargers consist of a light source, a negative carrier, a lens, and adjustable focus and height controls, allowing photographers to control the size, sharpness, and exposure of the final print.Exhibition - A public display or presentation of photographs, either in physical or digital format, for viewing by an audience. Photography exhibitions can take various forms, including gallery shows, museum exhibitions, online portfolios, or multimedia presentations, and may feature individual photographers, group exhibitions, or thematic collections.Exposure value (EV) - Exposure value is a numerical scale used to represent the combination of aperture and shutter speed settings that determine the overall exposure of an image. Each increment of exposure value represents a doubling or halving of the amount of light reaching the camera sensor, allowing photographers to adjust exposure settings while maintaining a consistent exposure value.Editing - Selecting, adjusting, and enhancing images to improve their visual appeal, composition, and storytelling. Editing may involve cropping, colour correction, exposure adjustments, retouching, and creative effects applied using digital image editing software such as Adobe Photoshop or Lightroom.External Flash - A portable flash unit that can be mounted on a camera's hot shoe or used off-camera for additional lighting in photography. External flashes provide more power, flexibility, and control over lighting compared to built-in camera flashes, allowing photographers to achieve creative lighting effects, reduce harsh shadows, and improve overall exposure in low-light situations.Extension Tube - A hollow, cylindrical attachment used in macro photography to increase the distance between the camera lens and the camera sensor, allowing for closer focusing and greater magnification of small subjects. Extension tubes do not contain optical elements but simply extend the lens-to-sensor distance, enabling macro photographers to achieve higher magnification ratios without the need for specialized macro lenses.Edge Sharpness -The clarity and definition of fine details and lines near the edges of objects in an image. High-edge sharpness indicates well-defined and crisp edges, while low-edge sharpness may result in soft or blurry edges, reducing the overall sharpness and clarity of the image.Emulsion - In traditional film photography, emulsion refers to the light-sensitive coating applied to photographic film or paper. The emulsion consists of light-sensitive silver halide crystals suspended in a gelatin or collodion base, which react chemically to light exposure during the photographic process, forming latent or visible images that can be developed and fixed to create photographic prints. Flash a burst of light. This can come from a pop-up flash built-in to the camera, a flash gun, or flash lights in a studio. Check out our 5 Pro Portrait Lighting Setups tutorial here. Flash Sync speeds the shutter speed at which the camera must be set whilst using flash lighting. Not using this will cause banding in an image. Focal length distance in millimetres where light rays converge in your lens to form a sharp image, and the camera sensor. In short, it controls your field of view. A low number will give you a wide field of view and a high number will give you a narrow field of view. Focal length determines whether a lens is categorised as being wide-angle, standard, or telephoto. Focusing the action where you focus your lens to get an area of your frame sharp. Flat Lay - Flat Lay Photography is a photograph taken from directly above looking down on usually products or food. Click here for our flat-lay photography tutorial.Fashion Photography - Fashion photography is a genre of photography that focuses on capturing clothing, accessories, and fashion trends in a visually appealing and artistic manner. Fashion photographers work closely with models, stylists, makeup artists, and designers to create images for editorial spreads, advertising campaigns, and fashion publications.F-Stop/F-Number - The F-stop, also known as the F-number or aperture value, is a numerical scale used to indicate the size of the aperture opening in a camera lens. Each F-stop represents a specific ratio of the lens's focal length to the diameter of the aperture opening, controlling the amount of light entering the camera and the depth of field in the resulting image. Need an F-Stop bootcamp? Check out our beginners course!FPS - FPS stands for frames per second and determines the speed at which a camera can take photos. It is especially important for sport and wildlife photographers, who need to be able to shoot rapidly to make sure they capture perfectly timed images.Full Frame - Full frame refers to a digital camera sensor size that is equivalent in dimensions to a traditional 35mm film frame. Full-frame sensors offer larger surface areas and higher resolutions compared to smaller sensor formats, resulting in superior image quality, dynamic range, and low-light performance in digital photography.Flags - Opaque or translucent panels or accessories used to block, shape, or control the direction of light in a scene. Flags are commonly used in studio photography and lighting setups to prevent unwanted light spills, create shadows, or shape the quality and direction of light sources.Fisheye Lens - An ultra-wide-angle lens that produces extreme distortion and a hemispherical perspective, creating a characteristic "fisheye" effect in images. Fisheye lenses have a very short focal length and a wide field of view, capturing a vast expanse of the scene with exaggerated curvature and distortion around the edges.Fixed-lens camera - Also known as a compact camera or point-and-shoot camera, is a digital camera with a built-in, non-interchangeable lens. Fixed-lens cameras are compact, lightweight, and easy to use, making them ideal for casual photography, travel, and everyday use.Focus - Focus refers to the sharpness and clarity of the subject in an image. Achieving proper focus involves adjusting the camera lens to ensure that the subject appears sharp and well-defined in the final image.Filter - A transparent or translucent accessory that attaches to the front of a camera lens to modify or enhance the appearance of the image. Filters can be used to control exposure, adjust colour balance, reduce glare, enhance contrast, or create special effects such as softening or blurring.Film - The light-sensitive material used in traditional film photography to capture and record images. The photographic film consists of a flexible base coated with a layer of light-sensitive emulsion containing silver halide crystals, which react chemically to light exposure to form a latent or visible image that can be developed and fixed to create photographic prints.Fine Art Photography - Fine art photography is a genre of photography that emphasizes aesthetic expression, creativity, and personal vision, rather than commercial or documentary purposes. Fine art photographers often create images with artistic intent, exploring themes, concepts, and emotions through visual storytelling and creative interpretation.Fast Lens - A fast lens is a camera lens with a large maximum aperture, allowing for faster shutter speeds and greater control over depth of field. Fast lenses are ideal for low-light photography, portrait photography, and capturing fast-moving subjects, providing enhanced light-gathering capabilities and creative flexibility in challenging shooting conditions.Field of View - Field of view (FOV) refers to the extent of the scene or subject visible through a camera lens at a given focal length. A wider field of view captures more of the scene in the frame, while a narrower field of view focuses on a smaller area with greater magnification and detail.Fill Flash - Fill flash is a lighting technique used to supplement or fill in shadows and reduce contrast in a scene by adding additional light to the subject. Fill flash is typically used in outdoor or backlit situations where the primary light source creates harsh shadows or underexposure on the subject.Flash Sync -Also known as flash synchronization, refers to the coordination of the camera's shutter release with the firing of an external flash unit. Flash sync ensures that the flash fires at the precise moment when the camera's shutter is fully open, synchronizing the exposure and preventing the flash from being cut off or partially obscured by the closing shutter.Focus Stacking -A technique used to increase the depth of field in a photograph by combining multiple images taken at different focus distances. Focus stacking aligns and merges the images, selectively blending sharp areas from each image to create a final composite image with extended depth of field and sharpness.Film Speed- Film speed, also known as ISO sensitivity, refers to the sensitivity of photographic film to light. A higher film speed indicates greater sensitivity to light, allowing for faster shutter speeds and improved performance in low-light conditions. Film speed is expressed using standardized ISO (International Organization for Standardization) ratings, such as ISO 100, ISO 200, ISO 400, and so on.Flare - Flare is a photographic phenomenon characterized by unwanted light reflections or artefacts caused by internal lens reflections, stray light sources, or bright light sources entering the camera lens at oblique angles. Flare can manifest as streaks, spots, or veiling glare in images, reducing contrast, saturation, and overall image quality.Fix - Fix, also known as fixing or hypo, is a chemical solution used in traditional film photography to stabilize and permanently preserve developed photographic prints or negatives. Fixer removes unexposed and undeveloped silver halide crystals from the emulsion, preventing further light sensitivity and ensuring the longevity of the final image.Film Leader Retriever - A tool used in traditional film photography to extract the leader or end of a roll of film from a film canister or cartridge.Feathering - Feathering softens the edges of a selection or adjustment, gradually blending it into the surrounding pixels to create a seamless and natural-looking transition without harsh or visible boundaries.Focal length - Focal length is the distance in millimetres between the centre of a lens and the camera sensor. It determines the angle of view as well as the magnification of the subject. Focal length is the measure used to categorize the different types of lenses: wide angle (135mm).Four-Thirds - Four-Thirds is a digital camera system and lens mount standard developed by Olympus and Kodak for digital single-lens reflex (DSLR) and mirrorless interchangeable lens cameras. Four-Thirds cameras feature a sensor size with a 4:3 aspect ratio and a lens mount optimized for compact size and compatibility with a wide range of interchangeable lenses. Generative AI - Generative AI can be used to generate realistic images, enhance photos, or create visual effects through techniques such as image synthesis, style transfer, and content generation. You can experiment with this in editing software such as Photoshop to enrich your photo editing. Gamut - Gamut refers to the complete range of colours that can be represented or reproduced by a specific device, such as a camera, display, or printer.Grain - Grain, also known as film grain or noise, refers to the visible texture or pattern of granular particles in a photographic image, particularly in film photography or high-ISO digital photography. Grain is caused by the random distribution of silver halide crystals in photographic emulsion or electronic noise in digital sensors, resulting in a characteristic grainy or gritty appearance in images.Graduated Filter - A filter with a gradient of density or colour that is used to selectively adjust exposure or colour balance in a scene. Graduated filters are often used in landscape photography to darken bright skies, reduce contrast, or enhance colours by selectively blocking or attenuating light in specific areas of the image.Guide Number - Guide number is a numerical rating that indicates the power or intensity of a flash unit's output, typically measured in meters or feet at ISO 100. The guide number is used to calculate the appropriate aperture setting for proper flash exposure based on the distance between the flash and the subject, considering the flash's power output and the sensitivity of the camera sensor.Gradient - A gradient, also known as a colour gradient or gradient fill, is a gradual transition of colour, brightness, or transparency between two or more colours or tones in an image. Gradients can be applied to backgrounds, overlays, or adjustment layers in digital image editing to create smooth and seamless transitions between colours or tones.Gicle - Gicle (pronounced zhee-klay) is a high-quality digital printing method used to produce fine art prints and reproductions of artwork using inkjet printers and archival pigment inks. Gicle prints are known for their exceptional colour accuracy, detail, and longevity, making them popular among artists, photographers, and collectors for creating museum-quality prints.Gravure - Gravure, also known as rotogravure or photogravure, is a traditional printing process used to reproduce photographic images in newspapers, magazines, and art prints. Gravure printing involves etching photographic images onto metal plates, which are then inked and pressed onto paper to transfer the image, resulting in high-quality reproductions with rich tonal gradations and fine detail.Gear A common term used to describe a photographers equipment.Grey Card - A grey card, also known as a white balance card or neutral reference card, is a photographic tool used to establish accurate colour balance and exposure settings in a scene. Grey cards have a neutral grey surface with a known reflectance value, which serves as a reference point for setting custom white balance or exposure compensation in-camera or during post-processing.Ghosting - Caused by reflections, flares, or internal lens elements that appear as semi-transparent or double images in a photograph. Ghosting artifacts can occur when light is scattered or refracted within the camera lens, resulting in unwanted reflections or secondary images superimposed on the primary subject.Grid - A visual guide displayed in the viewfinder or on the LCD screen of a camera to assist with composition and framing. Grids are typically divided into a series of horizontal and vertical lines that help photographers align and balance elements within the frame, such as horizons, leading lines, and points of interest.Gel - A gel, also known as a colour gel or lighting gel, is a translucent coloured filter or sheet used in photography and lighting design to modify the colour temperature, hue, or intensity of light sources. Gels are placed over light fixtures or flashes to create coloured lighting effects, correct colour casts, or match the colour temperature of different light sources. Learn all about shooting in a studio in our Studio Lighting course! Geotagging - Geotagging allows photographers to record and track the precise location where an image was captured, enabling geospatial analysis, mapping, and organization of photos based on location metadata.Global adjustment - A global adjustment, also known as a global edit or overall adjustment, refers to an image editing technique that applies changes uniformly to the entire image. Global adjustments can include changes to exposure, contrast, colour balance, sharpness, and other image parameters that affect the overall appearance of the photograph.GND Filter (Graduated neutral density filter) - A filter with a gradient of neutral density that is used to balance exposure in a scene with high contrast, such as landscapes with bright skies and dark foregrounds. GND filters gradually transition from clear to dark across the filter surface, allowing photographers to darken bright areas of the scene without affecting darker areas.Gigapixel - An image resolution containing one billion pixels, typically achieved through high-resolution digital imaging or image stitching techniques.Gyroscopic Stabilisation - Gyroscopic stabilization, also known as optical stabilization or image stabilization, is a camera technology that reduces unwanted camera shake and blur caused by hand movement during handheld shooting. Gyroscopic stabilization systems use gyroscopes or accelerometers to detect motion and compensate for camera shake by moving lens elements or sensor assemblies to maintain a stable image.Gaussian Blur - Gaussian blur is a digital image processing technique used to create a soft, smooth, and out-of-focus appearance in a photograph. Gaussian blur applies a mathematical algorithm known as a Gaussian function to blur or soften pixels within a selected area of the image, simulating the natural blurring effect of optical defocus or depth of field.Glare - Glare is a photographic phenomenon characterized by excessive brightness or reflection of light that obscures details, reduces contrast, and creates unwanted visual discomfort in an image. Glare can occur when light sources, such as the sun or artificial lights, are directly or indirectly reflected off shiny surfaces, glass, or water, resulting in distracting highlights or flare artefacts in photographs.Golden Hour The short period (usually an hour) before sunset or after sunrise. Its where the sun is low in the sky and the light produced is a deep orange/red. HDR (High Dynamic Range) a technique using exposure bracketing and post-processing to create an image with a higher dynamic range. An image with a higher dynamic range will have more detail in the lights, darks and colours. Learn about HDR in Lightroom.Histogram visual representation of the colour and luminance of an image. The left side of a histogram represents the darks, the middle the mid-tones and the right side the highlights. Higher peaks represent more information in that part of the exposure. E.g. a tall right side of a histogram would indicate a lot of highlights in an image. Hyperfocal Hyperfocal is the distance at which the focus point provides a deeper depth of field. It is often used by landscape photographers to ensure their scenes are as sharp as possible.Headshot - A headshot is a portrait photograph that focuses primarily on a person's face, head, and shoulders, typically used for professional purposes such as resumes, business profiles, or actor/model portfolios. Headshots are often taken in a studio or controlled environment with careful attention to lighting, composition, and expression to capture the subject's personality and professionalism. Want to take great headshots? Check out our Headshot Course with Mark Mcgee! Holga - The Holga is a low-fidelity plastic camera known for its simple design, toy-like appearance, and distinctive image quality characterized by vignetting, light leaks, and soft focus. The Holga gained popularity among photographers for its unpredictable and creative results, often associated with artistic experimentation and alternative photography techniques.Highlights - Highlights are the brightest areas in an image, where light is reflected or emitted at its highest intensity. In digital photography, highlights often represent the brightest portions of the scene captured by the camera sensor.Hot Shoe - A hot shoe is a mounting point on top of a camera where accessories such as external flashes, flash triggers, or other compatible devices can be attached and synchronized with the camera's shutter.Hue - Hue refers to the attribute of colour that distinguishes one colour from another on the colour wheel. It represents the dominant wavelength of light that defines the perceived colour of an object, ranging from red, orange, and yellow to green, blue, and violet.Hard Light - Hard light is a type of illumination characterized by strong, direct light that produces sharp, well-defined shadows and high contrast between light and shadow areas. Hard light sources create distinct, clearly defined edges and textures in a scene.High-Key - High-key lighting is a photographic lighting technique characterized by bright, even illumination that minimizes shadows and creates a light, airy atmosphere. High-key photographs typically feature predominantly light tones and minimal contrast between light and shadow areas.Haze - Haze is an atmospheric phenomenon caused by the scattering of light particles or moisture in the air, resulting in reduced visibility and a soft, diffused appearance in distant objects. In photography, haze can affect image clarity and contrast, particularly in landscape or aerial photography.High-speed sync - High-speed sync (HSS) is a flash synchronization technique that allows photographers to use electronic flash units at shutter speeds faster than the camera's maximum sync speed. HSS enables photographers to freeze motion and achieve proper exposure in bright ambient light conditions by synchronizing the flash with high-speed shutter movements.Hybrid viewfinder - A hybrid viewfinder is a type of electronic viewfinder (EVF) found in some digital cameras that combines optical and electronic components to provide both optical and digital viewing options. Hybrid viewfinders offer the advantages of traditional optical viewfinders with the additional information and features of electronic displays.High pass filter - A high pass filter is an image processing technique used to enhance image sharpness by accentuating high-frequency details and edges while suppressing low-frequency noise and unwanted image elements. High-pass filtering is commonly used in digital image editing to sharpen images and improve overall clarity.Histogram Stretching - Histogram stretching, also known as histogram equalization or contrast stretching, is an image enhancement technique used to adjust the tonal range and distribution of pixel values in an image histogram. Histogram stretching expands the dynamic range of an image by redistributing pixel values across the entire tonal range, enhancing contrast and improving overall image quality.Halation - Halation is a photographic artefact characterized by a diffuse, glowing effect around bright highlights or light sources in an image. Halation occurs when light reflects or refracts within the layers of a photographic emulsion or lens elements, causing light to spread beyond its intended boundaries and create a halo or aura effect.Highlight recovery - Highlight recovery is an image editing technique used to recover detail and reduce overexposure in the brightest areas of an image, such as blown-out highlights. Highlight recovery software analyses image data and selectively adjusts exposure, tone, and contrast to restore detail and texture in highlight areas without affecting other parts of the image. Image stabilisation Technology held in a camera lens or body that reduces camera shake caused by hand-holding the camera. Image Quality Setting on most cameras that changes the amount of pixels you capture and whether the camera shoots in Jpeg or RAW. Infinity (focusing) The furthest point away that your lens can focus on.ISO The sensitivity your light sensor is to light. Displayed as ISO 100 or ISO 400 etc. The lower the number (ISO 100) the less sensitive to light and the less noise the image will have. The higher the number (ISO 1600) the more noise the image will have but you can take pictures in much less light. ISO stands for - International Organisation for Standardisation.Incandescent Light - Incandescent light is a type of artificial lighting produced by heating a tungsten filament to high temperatures until it emits visible light. Incandescent bulbs produce warm, yellowish light with a continuous spectrum similar to natural sunlight, making them commonly used in indoor lighting fixtures and photographic lighting setups.Instant Photography - Instant photography, also known as Polaroid photography, is a photographic technique that produces instant prints or "instant photos" shortly after exposure, without the need for traditional film development or processing. Instant cameras use self-developing film packs containing chemicals that react to light exposure, producing a finished print within minutes.Infinity Curve - An infinity curve, also known as an infinity background or cyclorama, is a seamless, curved background surface used in photography studios to create the illusion of an endless backdrop without visible corners or edges. Infinity curves are often used in product photography, portraits, and commercial shoots to achieve clean, minimalist backgrounds.Intervalometer - An intervalometer is a camera accessory or built-in feature that allows photographers to automate the process of capturing images at set intervals over a specified time. Intervalometers are commonly used for time-lapse photography, astrophotography, and long-exposure sequences, providing precise control over exposure timing and image capture frequency.In-camera processing - In-camera processing refers to the image processing capabilities and features built into digital cameras to adjust and enhance images directly within the camera itself. In-camera processing includes functions such as white balance adjustment, colour correction, noise reduction, and creative filters applied to images before they are saved to memory. Jpeg The standard format for images. Its a compressed, or flattened, image that can be viewed by most devices and printed. Because they are compressed, they contain less information and are smaller. Jpeg stands for Joint Photographic Experts Group. Kelvin is a colour temperature measurement informing the colour of light. E.g. Daylight is 5500OK (Kelvins) and this gives a pure white light whereas a sunset will be around 3200K which will give a warmer, orange light. Used mainly in the white balance settings of your camera.Key Light - The key light is the primary light source in a photographic or cinematic lighting setup, positioned to illuminate the subject and provide the main source of illumination. The key light establishes the direction, intensity, and quality of light falling on the subject, shaping the overall look and mood of the image.Kit Lens - A kit lens refers to the standard zoom lens typically sold as part of a camera kit package with entry-level or consumer-grade digital cameras. Kit lenses are versatile, general-purpose lenses designed to cover a range of focal lengths, from wide-angle to moderate telephoto, and are commonly used for everyday photography applications.Kodak - Kodak, short for Eastman Kodak Company, is a historic American photography and imaging company founded by George Eastman in 1888. Kodak was a pioneer in the development of photographic film, cameras, and related products, and became synonymous with popularizing photography as a mainstream hobby and industry.Kodachrome - Kodachrome is a colour reversal film introduced by Kodak in 1935, known for its vibrant colours, sharpness, and archival stability. Kodachrome was widely used for professional and amateur photography until its discontinuation in 2009, due to the complex and environmentally hazardous processing required. Kodachrome remains iconic for its distinctive colour reproduction and nostalgic appeal.Kallitype - Kallitype is an alternative photographic printing process that produces rich, brown-toned prints using iron salts and silver nitrate. Kallitype prints are created by coating paper with a light-sensitive emulsion containing a solution of ferric oxalate and silver nitrate, exposing the coated paper to ultraviolet light through a negative, and processing the print in a series of chemical baths to develop and fix the image. Leading Lines composition technique using lines to guide the viewers eye into a part of the scene. Learn how to use leading lines here.Lightroom image management and editing software by Adobe. Allows you to organise your photography into folders, make global edits, and perform batch actions. Check out our course on Lightroom. Light drawing / Light painting long exposure technique that causes light to trail into lines. Light Leak - A light leak is a photographic artefact caused by unintentional exposure to light leaks or stray light entering the camera body or film cassette, resulting in streaks, flares, or fogging effects on the final image. Light leaks can occur due to worn seals, loose parts, or accidental opening of camera backs during film loading or processing.Light meter - A light meter is a device that measures the scenes luminosity to determine the best exposure value. Most cameras have a built-in light meter that relies on reflective readings through the lens.Live View - Live view is a feature found in many digital cameras that allows photographers to preview and compose their shots using the camera's LCD screen in real-time, rather than through the optical viewfinder. When the live view is activated, the camera's image sensor continuously feeds a live video feed to the LCD screen, showing exactly what the sensor sees.Light meter The device that measures the light in a scene to give the optimum exposure value. Cameras have in-built light meters, but in a studio, you use a hand-held light meter to gauge the exposure needed for a lighting set-up. Long Exposure A technique using a long shutter speed allowing light to enter the camera over a longer period of time. This will cause any moving objects to blur whilst keeping still objects still. Generally achieved whilst using a tripod. Click here to learn more about long exposures. Lens - A lens is a transparent optical element used in cameras and other optical devices to focus light onto a photosensitive surface, such as a camera sensor or photographic film. Camera lenses consist of multiple glass or plastic elements arranged in specific configurations to control the direction, angle, and magnification of light rays, resulting in sharp, clear images.Landscape Photography - Landscape photography is a genre of photography that focuses on capturing scenic views, natural landscapes, and outdoor environments. Want to capture landscapes like a pro? Check out our full course here. Lens Hood - A lens hood is a cylindrical or petal-shaped accessory attached to the front of a camera lens to reduce unwanted light and glare, improve contrast, and protect the lens from damage. Lens hoods help prevent lens flare, ghosting, and veiling glare caused by stray light entering the lens from off-axis angles, ensuring optimal image quality and clarity.Luminosity - Luminosity refers to the brightness or intensity of light emitted or reflected by a subject, surface, or light source. In photography, luminosity affects exposure settings and image appearance, influencing factors such as contrast, shadow detail, and overall tonal range. Luminosity can be measured and adjusted using light meters, exposure controls, and image editing software.Lens Flare - Lens flare is an optical phenomenon characterized by unwanted artifacts or patterns of scattered light and reflections that appear in photographs, typically caused by direct sunlight or bright light sources entering the camera lens at oblique angles. Lens flare can manifest as coloured streaks, circles, or haze in images, reducing contrast and image quality.Light Painting - Light painting is a photographic technique that involves using handheld light sources, such as flashlights, LED lights, or sparklers, to create deliberate patterns, shapes, and designs in a long exposure photograph. Light painters "paint" with light in a dark environment, moving the light source across the scene to capture streaks, trails, and illuminated subjects in the final image.Low-Key - Low-key photography is a lighting technique that uses dark tones, shadows, and mood lighting, with minimal bright highlights or mid-tones. Low-key images often evoke a sense of mystery, drama, or suspense, using contrast and selective lighting to emphasize shape, texture, and form in the subject.Lens Compression - Lens compression refers to the optical effect produced by telephoto lenses that visually compress the apparent distance between objects in a scene, making distant subjects appear closer together and enhancing the perception of depth and scale. Lens compression is commonly used in landscape, wildlife, and portrait photography to emphasize perspective and create impactful compositions.Lens Distortion - Lens distortion is an optical aberration that occurs when camera lenses bend light rays unevenly, resulting in geometric distortion, perspective distortion, or chromatic aberration in images. Common types of lens distortion include barrel distortion (bulging or curving of straight lines), pincushion distortion (converging or bowing of straight lines), and chromatic aberration (colour fringing or colour distortion).Lensbaby - Lensbaby is a brand of speciality camera lenses known for their unique optical effects and creative photography capabilities. Lensbaby lenses feature selective focus optics, flexible lenses, and tilt-shift mechanisms that allow photographers to achieve artistic blur, bokeh, and distortion effects, creating dreamy, ethereal images with a distinctive look and feel.Lens Correction - Lens correction is a digital image processing technique used to correct optical distortions and imperfections caused by camera lenses, such as distortion, vignetting, chromatic aberration, and perspective distortion. Lens correction software analyses image metadata and applies corrective adjustments to compensate for lens characteristics and improve overall image quality.Large Format - Large format photography refers to the use of photographic equipment that captures images on large-format film or digital sensors, typically larger than 4x5 inches (or 102x127 mm) in size. Large format cameras offer superior image quality, resolution, and detail compared to smaller formats, making them popular for architectural photography, landscape photography, and fine art prints.LCD Screen - An LCD (Liquid Crystal Display) screen is a type of flat-panel display used in digital cameras and electronic devices to preview images, display menus, and provide visual feedback. LCD screens use liquid crystal cells illuminated by a backlight to produce images and graphics, offering high-resolution displays with vibrant colours and sharp detail.Lens Mount - A lens mount is a mechanical interface or attachment mechanism used to connect interchangeable lenses to camera bodies securely. Lens mounts vary between camera manufacturers and models, with different designs, dimensions, and electrical contacts to ensure compatibility between lenses and camera bodies.Layer Mask - A layer mask is a non-destructive editing tool used in digital image editing software to selectively control the visibility and transparency of specific areas within a layer. Layer masks allow photographers to apply adjustments, filters, and effects to targeted areas of an image without permanently altering the original pixels, enabling precise and flexible image editing workflows. Macro extreme close-up photography, used to capture very small subjects or detail. Click here for some Macro photography ideas.M or Manual Mode mode that most DSLR and Mirrorless cameras have which allow for full control over all of the cameras settings. Learn how to master your cameras settings in our Beginners Course.Megapixel 1 million pixelsMetering Modes modes in your camera which control how the light meter measures light.Metadata specific details of a picture hidden within the file. Details could including camera used, lens used, camera settings, copyright information etc. To get the metadata information of an image, right click on the file and select Properties on a PC or Get Info on a Mac. Learn how to add your copyright details to your metadata in our Lightroom course. Manual Focus - This is when you manually adjusts the lens focus ring to achieve sharpness and clarity in the desired area of the image. Unlike autofocus, which relies on the camera's autofocus system to automatically focus on the subject, manual focus gives you full control over the focusing process, allowing for precise adjustments and creative control.Micro Four Thirds (MFT) - Micro Four Thirds (MFT) is a digital camera system and lens mount standard developed jointly by Olympus and Panasonic, characterized by a smaller sensor size and lens mount compared to traditional DSLR systems. MFT cameras feature a sensor size of approximately 17.3 13 mm and a lens mount with a flange focal distance of 19.25 mm, allowing for compact, lightweight camera bodies and a wide selection of interchangeable lenses optimized for the smaller sensor format. MFT cameras are known for their portability, versatility, and advanced features, making them popular among photographers and videographers for a wide range of applications.Mirrorless Camera - A mirrorless camera, also known as a mirrorless interchangeable lens camera (MILC), is a type of digital camera that uses an electronic viewfinder (EVF) or the camera's LCD screen to preview and compose images, rather than an optical viewfinder and reflex mirror system found in traditional DSLR cameras. Weve done a whole video about Canons mirrorless range; you can check that out here! Metering - Metering in photography refers to the process of measuring the intensity of light in a scene to determine the optimal exposure settings for capturing a well-exposed image.Medium Format - A film or digital camera format that uses larger-than-standard film or sensor sizes, typically larger than 35mm (full frame) but smaller than large format. Medium format cameras produce high-resolution images with superior detail, dynamic range, and image quality compared to smaller formats, making them popular for professional photography applications such as studio portraiture, fashion photography, and landscape photography.Megapixel - One megapixel is equivalent to one million pixels, representing the total number of individual picture elements (pixels) that make up the image. Higher megapixel counts generally result in higher-resolution images with greater detail and clarity when viewed or printed at larger sizes.Monopod - A monopod is a single-legged camera support device used by photographers to stabilize and steady their cameras while shooting handheld. Monopods are lightweight, portable, and easy to set up, providing additional support and reducing camera shake during long exposures, telephoto shooting, or situations where tripods are impractical or prohibited.Multiple Exposure - Multiple exposure is a photographic technique that involves exposing the same frame of film or image sensor to multiple successive exposures, resulting in a single composite image that combines elements from each exposure. Multiple exposures can be created in-camera using multiple exposures mode or by manually overlaying and blending multiple images during post-processing to create artistic and surreal effects.Motion Blur - Motion blur is a photographic effect caused by the relative motion between the camera, subject, and/or background during a long exposure or panning movement. Motion blur appears as streaks or smudges in the image, conveying a sense of movement, speed, or dynamic action. Motion blur can be intentional or unintentional, depending on the desired creative effect and shooting conditions.Monochrome - Monochrome, also known as black and white or grayscale, refers to images composed of varying shades of a single colour, typically black, white, and shades of grey. Monochrome photography eliminates colour information from the image, emphasizing form, texture, contrast, and composition, and evoking a timeless, classic aesthetic with a focus on tonal values and luminance.Moon Rise - Moonrise is the event where the moon becomes visible above the horizon as it ascends into the night sky. Moonrise presents unique photographic opportunities, allowing photographers to capture the moon against various natural or urban landscapes, silhouetted against colourful sunsets or twilight skies, or framed by architectural elements or scenic landmarks.Metadata - Metadata, also known as EXIF, is the essential information about the image. This includes dimensions, resolution, keywords, camera settings, focal length, copyright owner, etc. Most of this information is automatically added to the photos, but some fields can be added or modified in post-processing. Noise - Noise is a visual distortion that looks like tiny, coloured specs on a photo. It is especially visible in images shot at high ISO or very slow shutter speeds. Noise is the digital photography version of film grain.Neutral Density Filter - A neutral density (ND) filter is a photographic filter that reduces the intensity of light entering the camera lens without affecting its colour or hue. ND filters are commonly used in bright lighting conditions to achieve longer exposure times or wider apertures, allowing photographers to control shutter speed and aperture settings for creative effects such as motion blur, shallow depth of field, or balanced exposures in high-contrast scenes.Night Photography - Night photography is a genre of photography that focuses on capturing images in low-light or nighttime conditions, typically after sunset or before sunrise. Night photography presents unique challenges and creative opportunities, requiring long exposures, tripod stabilization, and specialized techniques to capture the subtle nuances of light, colour, and mood in nocturnal landscapes, cityscapes, astrophotography, or urban environments.Negative - The developed film or digital image file containing inverted colour and tonal information of the original scene captured by the camera. Negatives serve as the source material for producing photographic prints or digital images, with light and dark areas reversed in tonality compared to the final print or image. Negatives are typically scanned or printed onto photographic paper to create positive prints or digital reproductions.Noise reduction - Noise reduction is a digital image processing technique used to reduce or suppress unwanted artifacts, distortions, or graininess in digital photographs caused by image sensor noise, low-light conditions, or high ISO sensitivity settings. Noise reduction algorithms analyse image data to identify and remove random or repetitive patterns of noise, preserving image detail and improving overall image quality.Negative Space - Negative space, also known as white space or empty space, refers to the empty or unoccupied areas surrounding the main subject or focal point in a photograph. Negative space plays a crucial role in composition, balance, and visual storytelling, providing contrast, context, and breathing room to highlight the subject and draw the viewer's attention.Natural Light - Natural light refers to the ambient illumination provided by sunlight, moonlight, or other natural sources of light in a scene, without the use of artificial lighting equipment. Natural light photography harnesses the qualities of daylight, such as intensity, direction, colour temperature, and softness, to illuminate subjects and create visually compelling images with a natural, organic look and feel. Overexposed When the picture is too bright. Too much light has entered the camera. Optical Viewfinder - An optical viewfinder is a viewing system found in cameras that allows photographers to compose and frame their shots by looking through a physical eyepiece, which provides a direct optical view of the scene through the camera's lens. Optical viewfinders use mirrors, prisms, or pentaprisms to redirect light from the lens to the eyepiece, enabling photographers to see the subject in real-time and make precise framing and focusing adjustments.Optical Zoom - Optical zoom is a zoom mechanism in cameras that adjusts the focal length of the camera lens to magnify or reduce the apparent size of the subject without sacrificing image quality. Optical zoom works by physically adjusting the lens elements to change the focal length and magnification, allowing photographers to zoom in on distant subjects or zoom out for wider views while maintaining sharpness and detail in the image.Off-camera Flash - Off-camera flash refers to a portable or external flash unit that is detached or remotely positioned away from the camera's hot shoe or built-in flash, allowing photographers to create directional, studio-quality lighting effects and avoid harsh, on-camera flash shadows. Off-camera flash units are triggered wirelessly or connected via cables to the camera, providing greater flexibility and control over lighting angles and intensity.Overcast - Overcast skies provide soft, even illumination with reduced contrast, making them ideal for portrait photography, outdoor scenes, and macro photography, as the diffused light minimizes glare, highlights, and harsh shadows, resulting in balanced, flattering lighting conditions.Opacity - Opacity is a visual property in digital image editing that determines the degree of transparency or visibility of an image layer, object, or graphic element.On-camera flash - On-camera flash refers to a built-in or attached flash unit located on the camera body's hot shoe, used to provide additional illumination for capturing images in low-light conditions or to fill in shadows.Octabox - A type of light modifier used in studio photography to soften and diffuse artificial light sources, such as studio strobes or flashes, creating soft, flattering lighting with smooth transitions between light and shadow. Octaboxes feature a large octagonal shape with internal reflective surfaces and a diffusion panel, providing even, wraparound light with natural-looking catchlights in the subject's eyes. P - P is a semi-automatic camera mode. Contrary to popular belief, it doesnt stand for professional, but for programmed automatic. This mode allows photographers to control a few settings such as the use of flash, ISO, EV, and WB. The rest of the settings are automatically selected by the camera.Pixel - Pixel is the smallest unit of programmable colour represented on a digital display. Despite common photography myths, the number of pixels is not the determining factor on how good a camera is.Portfolio - A portfolio is, basically, a collection of work. Over the last years, online portfolios have become an absolute must and have grown to become full professional photographer websites. In addition to showcasing their work, photographers can now communicate with clients, constantly update their projects, and even book their services, all from a single platform.Prime Lens - Prime lenses are those with a fixed focal length. These lenses are usually smaller and faster, as they have a smaller number of moving parts and a less complicated lens formula. Their maximum apertures are usually lower than f2.8.Photoshop - Photo editing Software. Photoshop offers a comprehensive suite of tools and features for retouching, colour correction, layer-based editing, masking, and special effects, allowing users to create and enhance digital images with precision and creativity.Portrait Photography - A genre of photography focused on capturing the likeness, personality, and expressions of individuals or groups through carefully composed and posed images. Portrait photographers use various techniques, lighting setups, and compositions to create flattering and engaging portraits that highlight the subject's features, character, and emotions.Perspective - The spatial relationship between objects in a scene and their representation in a photograph, influenced by the photographer's viewpoint, focal length, and composition. Perspective affects the perceived depth, scale, and three-dimensional quality of images, creating a sense of space, distance, and proportion that can be manipulated for creative or documentary purposes.Parallax Error - Parallax error is a visual distortion or misalignment that occurs when the viewfinder or framing system of a camera does not accurately represent the perspective or framing of the final image captured by the camera lens. Parallax error is most pronounced in cameras with separate viewfinders or electronic viewfinders, where the viewing angle and framing may differ from the actual lens perspective, particularly in close-up or macro photography.Pixel Peeping - Pixel peeping is a colloquial term used to describe the practice of closely examining digital photographs at high magnification or 100% zoom level to scrutinize individual pixels for sharpness, detail, noise, or other image quality attributes.Panorama - A panorama is a wide-angle or panoramic photograph that captures a broad field of view, typically spanning horizontally or vertically across a scene, landscape, or cityscape. Panoramas are created by stitching together multiple overlapping images using specialized software or panoramic techniques, resulting in a seamless, high-resolution composite image with expansive views.Polarizer - A photographic filter that selectively blocks or reduces polarized light reflections, glare, and atmospheric haze from non-metallic surfaces such as water, glass, or foliage. Polarizers enhance colour saturation, contrast, and clarity in outdoor photography, particularly landscapes and architectural scenes, by eliminating unwanted reflections and enhancing blue skies and natural textures.Post-processing - Also known as image editing or digital editing, refers to the manipulation and enhancement of digital photographs using software tools and techniques to improve image quality, correct imperfections, and achieve desired artistic effects.Polaroid - Polaroid refers to instant film photography and instant print technology developed by the Polaroid Corporation, allowing photographers to capture and develop prints within minutes of exposure. Polaroid cameras use self-contained film cartridges containing light-sensitive chemicals that are automatically processed and developed by the camera, producing unique, tangible prints with distinctive colour and texture characteristics.Photojournalism - Photojournalism is a form of journalism that uses photography as a primary means of storytelling, documenting news events, social issues, and human-interest stories through visual imagery. Photojournalists capture candid, unscripted moments with journalistic integrity and ethical standards, conveying information, emotion, and social commentary through powerful, evocative photographs published in newspapers, magazines, and online media.Pinhole Camera A pinhole camera is a simple, lensless camera device that uses a small aperture or pinhole to project an inverted image of the scene onto a light-sensitive film or image sensor. Pinhole cameras produce soft-focus, ethereal images with infinite depth of field and long exposure times, relying on the principles of light diffraction and the camera obscura phenomenon to create unique, artistic photographs.Print - In photography, a print refers to a physical copy or reproduction of a photographic image produced on paper, canvas, or other print media using traditional or digital printing methods.Parabolic Reflector - A parabolic reflector is a specialized lighting accessory used in photography and studio lighting setups to focus and direct light from a light source, such as a studio strobe or flash, into a concentrated beam with controlled intensity and directionality. Parabolic reflectors feature a curved, parabolic shape that efficiently reflects and concentrates light rays, producing strong, directional illumination with minimal spill and soft, natural falloff.Push/Pull Processing - Push/pull processing is a film-developing technique used in analogue photography to adjust the effective sensitivity or ISO rating of photographic film by varying the developing time or chemical concentrations during processing. Push processing increases film speed and contrast, allowing photographers to compensate for underexposure or achieve higher sensitivity in low-light conditions, while pull processing decreases film speed and contrast for finer grain and increased shadow detail.Preset - A preset is a pre-defined set of editing adjustments or image processing settings saved within digital image editing software, such as Lightroom, to apply consistent, stylized effects or corrections to photographs with a single click. Presets can include adjustments to exposure, colour balance, contrast, saturation, and other parameters, allowing photographers to streamline their editing workflow and achieve desired looks or styles efficiently. Check out our free presets here. Quality - Quality is one of the most widely used and yet more vague photography terms. One way to consider the quality of an image is by looking for aberrations or information loss. Another, more subjective, one is to evaluate its composition, sharpness, exposure, etc.Quick-release plate - A quick-release plate is a mounting accessory used in tripod systems and camera support equipment to attach and detach a camera or other photographic device from a tripod head or mounting platform quickly and securely.Quick focus - Quick focus refers to a feature or function in camera autofocus systems that enables rapid and responsive focusing on the subject, allowing photographers to achieve sharp, accurate focus quickly and reliably.Quick view - Quick view is a feature found in digital cameras that allows photographers to preview captured images or review playback of photos and videos on the camera's LCD screen immediately after capture, without the need to switch to a separate playback mode or menu.Quartz flash - Quartz flash, also known as electronic flash or strobe, is a type of artificial lighting device used in photography to illuminate subjects with brief, intense bursts of light for capturing well-exposed images in low-light conditions or freezing motion.Quarter frame camera - A quarter frame camera is a type of film camera that exposes smaller-than-standard frames of film on 35mm film stock, resulting in more exposures per roll of film compared to traditional full-frame cameras. RAW file A RAW file preserves most of the information from the camera, it doesnt process it or compress it. You cant see or print a RAW file until you process it through a computer programme. Raw files are approximately 3-5 times the size of a Jpeg file.Resolution is the total amount of pixels the image has. The higher the resolution the more pixels the image has. This comes into effect mainly when printing images. To get good quality big images you will need a high-resolution image. Higher resolution images will also have given bigger file sizes. Rule of thirds - The rule of thirds is a compositional guideline used in photography and visual arts to create balanced and visually appealing compositions. According to this rule, an image is divided into nine equal parts by two equally spaced horizontal lines and two equally spaced vertical lines, resulting in a grid of intersecting points. Placing key elements or points of interest along these gridlines or their intersections helps create a sense of balance, harmony, and visual interest in the composition.Reflection - Reflections can add depth, symmetry, and visual interest to images, creating dynamic compositions with mirrored or doubled elements and enhancing the overall storytelling and mood of the photograph.Remote Shutter Release - A remote shutter release is a device used to remotely trigger the camera's shutter without physically pressing the shutter button on the camera body.Retouching - Retouching is the process of digitally enhancing or altering photographic images using image editing software to correct imperfections, improve appearance, or achieve desired artistic effects. Check out our full portrait retouching course here! Red-eye Reduction - Red-eye reduction is a feature found in cameras and flash units designed to minimize the occurrence of red-eye, a common photographic artefact caused by the reflection of light from the retina of the eye back into the camera lens during flash photography.Reflector - A reflector is a photographic lighting accessory used to manipulate and control light by reflecting and redirecting ambient or artificial light onto the subject to fill in shadows, soften harsh lighting, or enhance illumination. Reflectors come in various shapes, sizes, and materials, such as silver, gold, white, or translucent fabrics, providing different qualities of light reflection and diffusion for creative lighting effects in portrait, studio, and outdoor photography.Reportage - Reportage, also known as documentary photography or photojournalism, is a genre of photography that focuses on capturing candid, unposed moments and documenting real-life events, social issues, and human experiences in a journalistic or storytelling manner.RGB - RGB stands for Red, Green, and Blue, the primary colours of light used in digital imaging and colour reproduction systems.Rear curtain sync - Rear-curtain sync, also known as second curtain sync, is a flash synchronization mode used in cameras to control the timing of the flash burst relative to the closing of the camera's shutter curtain during long-exposure photography. In rear curtain sync mode, the flash fires just before the shutter curtain closes at the end of the exposure, resulting in a trailing flash effect that follows the motion of moving subjects, creating dynamic and natural-looking motion blur effects in photographs.Remote trigger - A remote trigger is a device or accessory used to remotely activate the camera's shutter from a distance, allowing photographers to capture images without physically touching the camera.Redscale - Redscale is a photographic technique or film effect achieved by loading photographic film into the camera backwards, exposing the film's emulsion layer to light through the film base rather than the usual emulsion side.Range Finder - A rangefinder is a focusing aid or optical device used in cameras to measure the distance between the camera and the subject accurately, typically using a coincident image rangefinder or an electronic rangefinder system. Rangefinders assist photographers in achieving precise focus and depth of field control, especially in manual focus or low-light situations, by providing distance feedback and focusing assistance through visual or electronic indicators. Saturation - Saturation refers to the colour intensity of an image. As their saturation increases, colours appear more vivid and are considered purer. Decreasing saturation results in muted colours, with full desaturation giving a monochromatic version of the image.Scene modes - Scene modes are automatic camera modes with pre-set exposure values based on different types of situations and subjects. These modes are aimed to help amateur photographers achieve the optimum exposure and DOF without having to control any of the settings.Scrims - Scrims are translucent fabric panels or screens used in photography and cinematography to diffuse and soften harsh light sources, such as sunlight or studio lights, for producing flattering, evenly illuminated portraits, still lifes, and scenes. Scrims reduce contrast, diffuse shadows, and eliminate specular highlights by scattering and diffusing light rays, creating soft, diffused illumination with smooth transitions between light and shadow areas.Shutter speed - Shutter speed is the length of time a camera sensor is exposed to light when taking a photo. Slow shutter speeds capture the blur of subjects in motion, making it highly valuable for night and landscape photographers. On the other hand, high speeds allow photographers to freeze a single millisecond in time, which is usually an absolute must in fields such as sports and pet photography.Stops - A stop is a unit of measurement used to quantify changes in exposure settings, including aperture, shutter speed, and ISO sensitivity. Each stop represents a doubling or halving of the amount of light reaching the camera sensor, resulting in a corresponding change in exposure.Stop bath - Stop bath is a chemical solution used in film and print development processes to halt the development reaction and stabilize the image after the film or paper has been exposed to the developer solution.Shutter - The shutter is a mechanical or electronic device in cameras that controls the duration of exposure by regulating the amount of time the camera's image sensor or film is exposed to light.Softbox - A softbox is a lighting accessory used in studio photography to diffuse and soften artificial light sources, such as studio strobes or continuous lights, for creating flattering, evenly illuminated portraits, still lifes, and product shots.Strip Box - A strip box, also known as a narrow softbox or a strip softbox, is a specialized lighting modifier used in studio photography to produce controlled, directional light with a narrow, elongated beam spread for accentuating and highlighting specific areas or subjects in the scene.Spot Metering - Spot metering is a camera metering mode that measures the brightness of a small, specific area or spot within the frame to determine the optimal exposure settings for capturing a well-exposed image.Street Photography - Street photography is a genre of photography that focuses on capturing candid, unposed moments and scenes of everyday life in public spaces, streets, urban environments, and cultural events. Want to avoid the most common mistakes in Street Photography read our full blog here. Strobe - A strobe, also known as a studio strobe or flash unit, is a powerful artificial lighting device used in photography to produce intense bursts of light for illuminating subjects, freezing motion, and creating dramatic lighting effects.Stacking - Stacking is a digital image processing technique used in photography to combine multiple exposures or images of the same scene to improve image quality, increase detail, and reduce noise or artefacts.Sharpness - Sharpness in photography refers to the clarity, detail, and definition of edges and fine textures within an image, indicating the degree of focus and resolution captured by the camera lens and sensor.Sensor - The electronic component within a digital camera that captures and converts light into electrical signals, forming digital image files.Sports Photography - Sports photography is a genre of photography focused on capturing action-packed moments, sporting events, and athletic performances, showcasing the intensity, athleticism, and emotion of sports and outdoor activities.Still Life Photography - Still life photography is a genre of photography that focuses on capturing inanimate objects, arrangements, and compositions arranged in a controlled setting, such as a studio or tabletop setup.Snoot - A snoot is a lighting modifier used in photography to control and direct artificial light into a narrow, focused beam with minimal spill and soft edges, typically for highlighting or accentuating specific subjects or areas within the frame.Star Trails - Star trails are long-exposure photographs that capture the apparent movement of stars across the night sky due to the Earth's rotation, resulting in streaks or trails of light formed by the cumulative effect of multiple exposures over time. Interested in capturing the stars? Check out our Astrophotography course! Tonal range - Tonal range is the total number of tones in an image, from its darkest to its brightest area. A wider tonal range allows for a higher variety of shades, which translates into more detail. In black-and-white photography, this translated into shades of grey. In digital photography, the tonal range is directly affected by dynamic range.Tripod - A tripod is a three-legged camera support device used in photography to stabilize and support cameras, lenses, and other photographic equipment, allowing photographers to achieve sharp, steady images with reduced camera shake and blur, especially in low-light conditions or long-exposure photography.TIFF - TIFF, short for Tagged Image File Format, is a widely used file format for storing high-quality digital images with lossless compression and support for multiple layers, channels, and colour spaces.Telephoto Lens - A telephoto lens is a type of camera lens with a longer focal length than a standard or normal lens, providing magnified, narrow-angle views of distant subjects and compressing perspective for capturing distant scenes with enhanced detail and clarity.Tungsten - Tungsten, also known as incandescent light or warm light, is a type of artificial lighting commonly used in photography and cinematography, characterized by its warm colour temperature and continuous spectrum similar to natural sunlight.Texture - Texture in photography refers to the tactile quality, surface characteristics, and visual patterns of objects or subjects captured in a photograph, conveying a sense of depth, dimension, and tactile sensation.Tone - Tone refers to the relative brightness or darkness of areas within an image, representing the tonal range from pure black to pure white.Tilt-shift Lens - A tilt-shift lens is a specialized camera lens with adjustable tilt and shift mechanisms that allow photographers to control perspective distortion, depth of field, and the plane of focus for creative and technical purposes.Teleconverter - A teleconverter, also known as an extender or telephoto converter, is a camera accessory used to increase the effective focal length and magnification of a lens by multiplying the focal length of the lens its attached to.Tracking - Tracking is a photographic technique used to capture sharp images of moving subjects by continuously adjusting the camera's position or movement to match the subject's motion, keeping it in focus and centred within the frame throughout the exposure.Timed Exposure - A timed exposure, also known as a long exposure or bulb exposure, is a photographic technique that involves using a slow shutter speed to prolong the duration of exposure, allowing more light to reach the camera sensor and create visually striking effects such as motion blur, light trails, or smooth water effects.Tone Mapping - Tone mapping is a digital image processing technique used in high dynamic range (HDR) photography to adjust and compress the wide range of tonal values captured in multiple exposures into a single, visually balanced image with optimal contrast and detail.Texture Overlay - Texture overlay is a digital image editing technique used to apply textured layers or patterns onto photographic images to add depth, visual interest, and artistic effects. Get 50 FREE light leak overlays here!Tintype - A tintype, also known as a ferrotype or melainotype, is a photographic process popular in the 19th century for producing direct positive images on thin metal plates coated with a collodion emulsion. Tintypes are characterized by their metallic sheen, distinctive contrast, and unique aesthetic qualities, resulting in durable, one-of-a-kind images with rich tonal range and tactile texture, often used for portraiture and documentary photography during the Civil War era.Test Strip - A test strip is a small section of photosensitive material, such as film or photographic paper, exposed to incremental amounts of light for a specified duration during the printing or enlarging process to determine the optimal exposure time and contrast settings for producing a well-exposed and balanced final print. Underexposure when the picture is too dark. Not enough light has entered the camera. Ultra-wide Angle Lens - A type of camera lens with an exceptionally short focal length and a wide field of view, allowing photographers to capture expansive scenes and dramatic perspectives with exaggerated depth and spatial distortion.UV Filter - Also known as an ultraviolet filter or skylight filter, is a transparent optical filter used in photography to absorb ultraviolet (UV) radiation from the sunlight and reduce the bluish cast and atmospheric haze often present in outdoor images.Unsharp Mask - A digital image processing technique used to enhance image sharpness and perceived detail by selectively increasing edge contrast and accentuating fine textures within a photograph.Uncompressed - A file format or data storage method in digital photography that retains the original, raw sensor data without applying any compression algorithms or lossy data reduction techniques.Underwater Photography - Underwater photography is a specialized genre of photography that involves capturing images and videos beneath the surface of the water, showcasing marine life, underwater landscapes, and aquatic environments with unique lighting, colours, and textures. Underwater photographers use waterproof cameras, underwater housings, and specialized lighting equipment to overcome challenges such as water pressure, buoyancy, and light attenuation, creating stunning visual narratives of the underwater world.Uniform Lighting - The even distribution of light intensity and colour temperature across the entire scene or subject, resulting in consistent illumination without noticeable variations or hotspots.UV Haze Filter - Also known as a UV-blocking filter or haze-cut filter, is a type of optical filter used in photography to reduce atmospheric haze, ultraviolet (UV) radiation, and blue light pollution from entering the camera lens and affecting image quality.Uplighting - A lighting technique used in photography and cinematography to illuminate subjects from below, directing light upwards towards the subject to create dramatic shadows, sculpted contours, and a sense of depth and dimension. Uplighting enhances the visual impact of portraits, sculptures, and architectural elements by emphasizing texture, form, and contrast, while also adding a sense of mystery and intrigue through the play of light and shadow.Umbrella - A versatile lighting modifier used in photography to diffuse, soften, and shape artificial light sources, such as studio strobes or speedlights, for creating flattering, evenly illuminated portraits, group shots, and product images.Urban Landscape Photography Urban landscape photography is the practice of photographing man-altered landscapes in cities, towns and the like, usually to show the impact of humans on the planet. Want to know more? Check out our full blog post on Urban Landscape Photography! Vibrance post-processing setting that allows you to target and adapt the dull, muted colours of an image. Click here for our video on the difference between Saturation and Vibrance. Vignetting where the corners of an image are made darker or lighter. Used to draw the viewers eye into the scene. Can be reduced or increased using post-processing software.Viewfinder - An optical or electronic component on a camera that allows photographers to compose, frame, and focus images by providing a direct view of the scene through the camera's lens or imaging system.Vanishing Point - The vanishing point is a visual concept in perspective drawing and photography where parallel lines appear to converge and meet at a single point on the horizon or at an infinite distance, creating the illusion of depth, distance, and spatial recession in two-dimensional images. Vanishing points are commonly used in architectural photography, landscape photography, and street photography to guide composition, lead the viewer's eye, and create a sense of perspective and scale. Watermark text or image added to a photo to identify the ownership of the picture. Learn how to turn your own signature into a watermark here. White balance An adjustment that compensates for the colour temperature of the scene. Cameras have certain white balance modes such as daylight, tungsten and flash.Wide-Angle Lens - A type of camera lens with a shorter focal length and a wider field of view than a standard or normal lens, allowing photographers to capture expansive scenes, architectural interiors, and immersive landscapes with greater perspective and spatial context. Wide-angle lenses typically have focal lengths shorter than 35mm (in full-frame equivalent).Workflow - The systematic process or series of steps involved in capturing, editing, organizing, and managing digital images from initial capture to final output in photography and digital imaging workflows.Wildlife Photography - Wildlife photography is a specialized genre of photography focused on capturing images of animals, birds, and wildlife in their natural habitats, showcasing their behaviour, interactions, and environmental relationships. Wildlife photographers use long telephoto lenses, camouflage techniques, and patient observation to capture intimate portraits, action shots, and storytelling images of wildlife species in their native ecosystems, promoting conservation awareness and appreciation of biodiversity. Want to learn all about wildlife photography? Check out the full course with Andy Rouse here! Wet Plate Collodion - Wet plate collodion is a historic photographic process invented in the mid-19th century for producing direct positive images on glass or metal plates coated with a light-sensitive collodion emulsion. Wet plate collodion photography involves preparing, sensitizing, exposing, and developing the plates using wet chemistry techniques, resulting in unique, one-of-a-kind images with distinctive aesthetic qualities, tonal range, and tactile texture prized by contemporary fine art photographers and historic process enthusiasts.Warp tool - The warp tool is a digital image editing tool found in software programs such as Adobe Photoshop that allows photographers and digital artists to distort, manipulate, and transform selected areas or objects within an image by bending, stretching, or warping pixels using customizable control points and handles.White Point - White point refers to the colour temperature or chromaticity of pure white light displayed or captured in a photograph, representing the reference point for neutral colour balance and accurate colour reproduction within an image.Wrist Strap - A camera accessory used to secure and carry a camera securely around the wrist of the photographer, providing added stability, security, and convenience while shooting on the go. X-Sync The fastest flash sync speed of your camera. Its the faster shutter speed at which the whole image sensor is exposed to allow in a burst of flash.X-Ray Photography - Also known as radiography or medical imaging, is a specialized imaging technique that uses X-rays to capture detailed, non-invasive images of the internal structures, organs, and tissues of living organisms, including humans, animals, and plants.Xerography - Xerography is a photocopying and printing technology used in office copiers and laser printers to produce high-quality, electrostatic images by using a photoconductive drum, toner particles, and heat to transfer and fuse powdered toner onto paper or other media. Yellow filter one of the most popular types of colour filters on black and white photos. Can now be added to black and white images in post-processing.Yashika - A Japanese camera brand known for producing a wide range of 35mm film cameras, medium format cameras, and digital cameras from the mid-20th century to the present day.Yoke - In photography and lighting equipment, a yoke refers to a mechanical support structure or bracket that attaches to the base of a lighting fixture, such as a studio strobe or stage spotlight, allowing for versatile positioning, angling, and mounting options. Zoom lens lens with a changeable focal length. E.g. you can zoom in and out with a zoom lens. I hope you like our photography terminology explained document which can be downloaded at the top of this page. If you do, please leave us a comment and support us by sharing it with your friends and subscribe to our newsletter at the bottom of this page for more.We also have an excellent learning community on social media so please join us there as well. Thanks for watching and remember Learn more at The School of Photography. Hi, Im Marc Newton and Im a photographer, educational speaker, author, teacher of photography and the founder of The School of Photography. Follow my personal work on Facebook, Instagram. Welcome to our in-depth exploration of the fascinating world of photography! In this series of terms and definitions, we will take you on a journey through various aspects of photography, providing comprehensive and beginner-friendly insights into key topics. Whether you are a budding photographer looking to enhance your skills or simply someone who appreciates the art of visual storytelling, this series has something for you.Each article delves into a specific realm of photography, offering a detailed glossary of terms and their definitions. Think of it as your go-to reference guide, providing clarity on essential photography concepts. Our aim is to make these complex subjects as accessible and easy to understand as a casual conversation with a friend.Topics coveredSo, whether you are passionate about landscape photography and yearn to capture the grandeur of natural landscapes, or you are keen to master the art of post-processing and editing to elevate your photography to the next level, this series has you covered.Grab your camera, prepare to be inspired, and let us embark on this visual journey together. We are ready to unravel the secrets of the photography world, one term at a time.Let us get started!Composition and TechniquesWelcome to a journey through the enchanting realm of landscape photography. In this series of blog articles, we delve into the artistic and technical aspects of composition and techniques, offering insights to beginner and intermediate photographers seeking to elevate their craft. Whether youre an aspiring landscape photographer or a seasoned enthusiast, our aim is to help you unlock the secrets of creating captivating, awe-inspiring images.Each article in this series uncovers the intricacies of composition and techniques, providing a comprehensive understanding of how to enhance your visual storytelling skills. From mastering visual balance to harnessing the magic of ethereal light, were here to guide you on a creative voyage through the world of landscape photography. Some terms and definitions may be replicated from other topics.So, grab your camera, prepare to be inspired, and lets embark on this visual journey together. Were ready to help you hone your skills, one composition and technique at a time.Lets get started!TermDefinitionAbstract PhotographyA style of photography that emphasizes shapes, colours, and patterns rather than depicting recognizable subjects.Aspect RatioThe proportional relationship between an image's width and height.Asymmetrical BalanceCreating balance through unevenly distributed elements.Background ElementsObjects or elements positioned in the background, adding depth and context to the image.BalanceThe distribution of visual weight in a composition to create harmony.CompositionThe arrangement of elements within the frame to create an aesthetically pleasing image.CompressionThe visual effect of making distant objects appear closer or more prominent in the composition, often achieved with a telephoto lens.CroppingRemoving or adjusting parts of an image to enhance its composition.Depth of Field (DOF)The range of distances in an image that appears acceptably sharp.Diagonal LinesLines that run diagonally across the frame, adding dynamic energy and leading the viewer's eye through the composition.Fill the FrameFilling the composition with the subject to eliminate distractions.Forced PerspectiveA technique that manipulates the perception of depth and size by placing objects of different scales in the frame.Foreground ElementsObjects or elements placed in the front of the composition to add depth and context.Foreground InterestCompelling elements placed in the foreground to provide depth and engage the viewer's eye in the overall composition.FramingUsing natural elements or objects within the scene to frame the subject and draw attention.Golden HourThe time shortly after sunrise or before sunset when the lighting is soft and warm.High Dynamic Range (HDR)A method that combines multiple exposures to capture a wider range of tones and details in a composition.Horizon LineThe line that separates the earth and sky in a landscape composition.JuxtapositionPlacing contrasting elements together to create visual interest.Leading LinesElements within a photo, like roads or fences, that guide the viewer's eye into the image.Lens SharpnessThe degree to which a camera lens can render fine details, contributing to the overall clarity of the composition.Light StreaksCapturing the movement of light sources, such as stars or vehicles, as streaks or trails in the nighttime sky.Lines and PatternsRepeating lines or patterns that add structure to the composition.Midground ElementsObjects or elements positioned in the middle ground of the composition.Motion BlurThe technique of capturing moving subjects with a slower shutter speed, resulting in a sense of motion and dynamism in the image.Motion PathThe trajectory followed by a moving subject in the frame, used to guide the viewer's eye and create flow.Negative SpaceThe empty areas in a composition that help highlight the subject.OverexposureWhen too much light reaches the camera sensor, resulting in an overly bright image.PanningA technique where the camera follows a moving subject, resulting in a sharp subject and a blurred background.PanoramaA wide-angle view or composite image of a landscape.Parallax EffectA visual phenomenon where the position or direction of an object appears to change when viewed from different angles.Point of InterestA specific area or element in a composition that captures the viewer's attention and serves as the focal point.Point of View (POV)The specific angle and position from which a photo is taken.Reflected LightLight that has bounced off another surface before illuminating the subject, creating softer and diffused effects.ReflectionCapturing the mirrored image of a subject on a reflective surface, often water.RepetitionThe use of repeated elements to add structure and interest.Rule of OddsA guideline that suggests an odd number of elements is more visually appealing.Rule of SymmetryCreating balance by mirroring elements on both sides of the frame.Rule of ThirdsDividing the frame into a 3x3 grid and placing key elements along the lines or intersections.Scale and ProportionThe use of objects or elements in the composition to indicate size relationships, adding depth and context.S-CurveA curved line or path in the composition that resembles the letter "S," used to add grace and flow to the visual narrative.Selective FocusThe deliberate choice to focus on a specific subject while rendering other elements in the composition out of focus.SimplicityThe use of minimal elements to create an uncluttered and effective composition.Subject PlacementThe intentional positioning of the main subject within the frame to create balance and focus.Symmetrical BalanceAchieving balance by mirroring elements on either side of the frame.TextureThe visual or tactile quality of an object's surface.Vanishing PointThe point in the composition where parallel lines appear to converge.VignettingA gradual darkening of the image towards the corners, often for artistic effect.Visual BalanceThe harmonious distribution of visual elements in a composition, ensuring that no area dominates the overall image.Visual FlowThe path that guides the viewer's eye through the composition, directing their attention to key elements in the image. ConclusionIn this comprehensive glossary of Composition and Techniques for landscape photography, weve ventured into the fascinating world of visual storytelling. These terms and definitions provide a roadmap for honing your skills and capturing the breathtaking beauty of landscapes. From understanding visual balance to experimenting with creative composition, you now possess the vocabulary to take your photography to new heights.As you continue your photographic journey, remember that mastering these concepts will be the key to creating striking and emotive images that resonate with viewers. Keep exploring, practicing, and pushing the boundaries of your creativity. With these tools at your disposal, the world of landscape photography is your canvas, waiting to be painted with your unique vision.So, seize your camera, step into the great outdoors, and immerse yourself in the world of Composition and Techniques in landscape photography. There are countless stories and moments waiting to be captured through your lens.Useful videos to watch All photographers start as beginners, and most likely, the first step is figuring out the confusing camera settings. If you have ever been overwhelmed with photography jargon like aperture or ISO, you are not the only one! The good news is you do not need a degree in photography or years of experience to take a great photo. You need some knowledge and curiosity. That is why we will check out 60+ photography terms that will help build your confidence and allow your next photo to be your best yet. Aperture means the opening that lets light go through the lens to the camera. You can change this holes size to control the amount of light that hits the sensor or the negative film. The size of the aperture is key in deciding how much light gets in and how sharp or blurry the background looks. Source: pexels.com The aspect ratio tells us how the width and height of a picture relate to each other. It is a ratio of width over height. The type of the camera sensor decides the aspect ratio, but you can tweak it after taking the photo with some editing tricks. The ratios 3:2 (full-frame mirrorless, 35mm film) and 4:3 (usual in most DSLRs) are pretty standard for aspect ratios. The 4:5 ratios been catching on because thats how Instagram likes to cut pictures that are tall. A lot of modern cameras have this feature of Autofocus. Cameras started getting autofocus around the 80s, and man, they just keep getting more intricate. This gizmo takes a look at how far something thats not moving is from the camera using sensors. Then, it tells tiny motors in the lens or the camera itself to tweak the lens so whatever youre snapping a pic of looks sharp. Bokeh effect is an optical phenomenon that makes bright out-of-focus elements aesthetically pleasing. Using a fast lens at its wider aperture turns a busy background into a blurred, homogenic canvas where light appears as soft shapes. The number of blades in the diaphragm determines the form of these points of light. A higher number of blades makes these elements appear more circular. Source: pexels.com Bracketing is a technique used when a photographer is not sure if the exposure settings they have chosen will produce the best results. First, an exposure is made according to the meter reading. Then, two or more further exposures are made of the same composition. Some are underexposed, and some are overexposed. This provides a photographer with more choice when they are post-processing their images. You might also like: Shutter Speed In Photography: Meaning, Uses, Examples & More Photographers also call burst mode continuous mode. In this setting, the camera opens and closes the shutter repeatedly, taking consecutive photographs as long as the photographer holds down the shutter button. Many cameras have two burst modes: low-speed and high-speed. Speeds vary from camera to camera. Composition is the manner in which elements are positioned within a photo. It is considered one of the most important components of an image, as it allows the photographer to guide the viewers eye across the image towards the main subject. Source: pexels.com The term contrast is all about the gap between the super dark areas and super bright bits in a picture. Amping up the contrast means the shades and surfaces pop more, bringing life and zip to the snap. But if you keep the contrast low, your image could look dull or the same because theres not much difference in tones. Cropping a photo means trimming or changing its edges to boost how it looks, to make sure the main subject gets all the eyes, or to tweak how big it is or its shape. Photographers do a bit of cropping to remove stuff that messes up the scene and get everyone to focus on the good part. When youre talking about how much of your picture looks super crisp, thats the depth of field. A bunch of things you can mess with affects this, and snap shooters change them up to get the look they want. The hole in the lens, thats the aperture, its super important for controlling the depth of field. You pop open that aperture a bunch, and boom, youve got a super narrow depth of field. How close the camera is to whatever youre shooting, and how far away the background stuff is, that plays into the depth of field too. You might also like: Free Photoshop Plugins For Effortless Editing Source: pexels.com Digital zoom makes an images middle part appear larger by magnifying it right in the camera. Its kind of like using a zoom lens, but without screwing up the image quality or dropping the resolution the way digital zoom does. Opting for telephoto lenses to magnify doesnt hurt the image quality too much. Think of dynamic range as the scale from the brightest whites to the darkest blacks in a photo. Digital sensors catch a bit of a narrower dynamic range than what you get with film, and both dont quite match up to what our eyes can see. Exposure is the amount of light that reaches the camera sensor. It also determines how light or dark an image is. The aperture, shutter speed, and ISO determine the exposure of an image. This is a feature on cameras that allows you to adjust the exposure settings beyond what the cameras automatic mode has chosen. You can use it to brighten or darken an image, and it helps you fine-tune exposure in tricky lighting situations. Source: pexels.com Digital cameras and software generate EXIF data to add information about how a photo was made to the image file. It contains data about the camera, lens, settings, date, etc. You might also like: A Beginners Guide to the Indispensable Exposure Triangle The term F-Stop (f/number) refers to the measurement of the aperture openings of a camera lens. The f-stop number is indicated as f/. The f, signifies the focal length of the lens and whatever comes after the f is the division of whatever the lens creates to make it an aperture pixel. Photographers use a fill light as any additional light for taking a photo. It can be ambient light or an introduced light source such as a flash or LED. It can soften hard shadows in dramatic lighting setups. Moreover, it can also help create a more three-dimensional appearance that matches the depth of a photograph. Focal length is nothing but the distance in millimeters between the center of a lens and the camera sensor. It defines the angle of view as well as the magnification of the subject. Focal length is the measure used to categorize the different types of lenses. Golden hour, also called magic hour, is the period right before sunset and after sunrise. During this time, the sun is low on the horizon, so light takes on a redder shade than when its higher up in the sky. Source: pexels.com Grain appears as small particles in film and photographs produced from film. It is the light-sensitive silver halides that metamorphose into metallic silver when exposed film is developed. You might also like: Best Vector Graphics Software A Complete Guide A Guide number indicates the power or intensity of a flash units output. It is measured in meters, at ISO 100. The guide number helps determine the aperture needed for correct flash exposure relative to the distance between the subject and the flash. It also accounts for the flashs output power in relation to the sensors sensitivity. A histogram is the visual representation of the luminance of an image. The left side of the graph represents the shadows, while the right side belongs to the highlights. The height of the histogram shows how many pixels there are for each specific luminance level. HDR, which stands for high dynamic range, is a technique that gives images a wider dynamic range than the one captured by the camera. This technique aims to represent a scene as close as possible to how the human eye saw it. HDR images are created by combining multiple photos with different exposure values. Source: pexels.com It is the distance at which a lens should be focused to achieve the maximum depth of field possible. This is useful for landscape photography, where a considerable depth of field is desired. ISO is how sensitive the camera sensor or film is to light. This is expressed as a number. The lower the number, the less sensitive the sensor or film is. This means you can set a lower ISO in bright, sunny conditions. The lower the ISO setting the less digital noise is present, but that is somewhat dependent on the image sensor. This feature in cameras and lenses helps to minimize blur from camera shake. This results in sharper images. It is helpful for handheld shooting or in low-light situations. An intervalometer is a camera accessory or built-in feature that allows photographers to automate the process of capturing images at set intervals over a specified time. Intervalometers are commonly used for time-lapse photography, astrophotography, and long-exposure sequences because they precisely control exposure timing and image capture frequency. Source: petapixel.com JPEG is a widely used image file format. The term lossy means that when a photograph is saved, some of the very relevant information or data for that photo is omitted. A high compression level for a JPEG is particularly low quality. The more a JPEG photo is compressed, the smaller the image file will be. You might also like: Image File Format Guide: Whats the best Image File Format? Kelvin, or the Kelvin scale, measures the color temperature. It is closely related to the white balance option in digital photography. The key light is the main light illuminating a photograph. It can be natural or artificial. Lens flare is the effect of light scattering within a camera lens. This results in bright and sometimes colorful spots or streaks in an image. The lens flare effect is often seen as a flaw, but it can add artistic elements to photos. Source: pexels.com Leading lines are visual elements such as roads, paths, or structures that lead the viewers eye towards a specific point in an image. This can create a sense of depth and guide the viewer through the photo. Long exposure is sometimes described as a slow shutter speed. This exposure is so long that leaves the shutter of the camera open for several hours. Small amounts of time can be set by the camera, or by a manual adjustment with the camera set to Bulb mode. You might also like: How To Protect Images On A Website Source: pexels.com Manual mode is a camera setting that allows a photographer to control all the exposure settings. In photography terms, metering means taking a meter reading before capturing a photograph. Digital noise in photographs consists of miscolored pixels or pixels of incorrect luminance values in images produced using high ISO settings. It is most noticeable in underexposed and shadow areas in photographs. ND filters block a given amount of light from passing through the lens. They can be measured in stops, and they come in varying strengths. A portion of the filter will cause part of the filter to block light while having a clear piece. These filters are also popular among landscape photographers, as they can reduce the bluing effect of the sky in landscape pictures. Overexposure occurs when the exposure value is higher than it should be, resulting in a loss of information over highlighted areas. Source: pexels.com An optical zoom is more commonly called a zoom lens. This provides a photographer with the ability to manipulate the focal length of the lens to include more or less in their compositions without physically changing their location. Some cheaper models of cameras have digital zoom functionality. You might also like: How To Sell Stock Photos Online | Top Websites To Earn Money Prime lenses are those with a fixed focal length. These lenses are usually smaller and faster as they have fewer moving parts and less complicated lens formulas. Prime lenses generally have max apertures of f2.8 and lower. Panning is when, in an image, photographers take a picture of a moving subject so they create clingy or sometimes sharp images when shooting at slow shutter speeds. A pixel is the smallest part of a digital sensor or image. Source: pexels.com Quick-release plates are small universal mounting plates that will make tripod-mounting easy. When you mount your camera to a tripod with a quick-release system, you can quickly and easily attach and detach any time when needed in seconds. This will significantly reduce slippage and speed up the cameras take-down and set-up on the tripod. A RAW image file format keeps all the information that a camera or scanner captures during exposure. A RAW image format is uncompressed and retains all the details of an image. Each camera manufacturer establishes its file name extension to RAW images. The rule of thirds relies on the style of composition where the frame has been divided into a grid with two equally spaced horizontal lines and two equally spaced vertical lines. You align the subject or primary aspects of your image with the four intersections or simply with the vertical or horizontal lines in some manner. Source: pexels.com Photographer-specific accessories like light reflectors enable photographers to redirect more light into the area of their composition. The argument of a light reflector can be anything from a simple piece of paper to a developed model with more reflective material options. Shutter speed refers to how long the camera sensor is being exposed to light while the photographer is taking a photo. The shutter speed at slow speeds can blur subjects that are in motion. Fast shutter speeds will freeze a millisecond in a moment, which is vital to sports and pet photography. Soft light is a photography term used to describe the light that casts shadows with indefinite edges or soft edges. This type of light is indirect and diffused, such as when the sun is on a cloudy day. You might also like: Clever Instagram Photo Hacks Every Content Creator Should Know Source: pexels.com Saturation refers to the color intensity of an image. As their saturation increases, colors appear more vivid and are considered purer. Decreasing saturation results in muted colors, with full desaturation giving the image a monochromatic version. Telephoto lenses have a focal length of more than 100mm. This style of lens has the effect of making the subject in a photo look larger. Distance has the appearance of being compressed in photos taken with telephoto lenses. The longer the focal length is the more compression occurs. It is a photography technique where frames are taken at regular intervals and then stitched together to create a video that shows the passage of time. Its often used in nature or architectural photography. A tripod is a three-legged stand that photographers use to position the camera. This helps reduce camera movement and stabilize the camera so they can take sharp, steady photos. A tripod is particularly useful for longer shutter speeds and using telephoto lenses. Source: pexels.com When the sensor (or film) reaches an exposure level with too little light, the photograph becomes underexposed. The image turns out to dark because, ultimately, there was not enough light striking the sensor or film for a proper exposure. Ultraviolet (UV) filters limit the ultraviolet rays that reach the lens and therefore affect the photograph. UV filters also act as a lens protector for the front element of the lens. Photographers sometimes describe UV filters as haze filters You might also like: Must-Read Photography Quotes for Creatives This technique means darkening of the corners of an image occurs when a photographer uses wide aperture settings or specific lens types. Photographers can use vignetting to demonstrate their creativity, which draws attention toward subject of the photo or reduce it through the editing process. Source: pexels.com It is an optical or electronic device used for composing and framing a photo before taking it. Its typically located at the top of the camera body and allows the photographer to see what will be captured in the final image. White balance makes the colors in your photo look more accurate. It makes white things white no matter what the lighting is. A wide-angle lens allows you to capture more of the scene in one single image. Photographers often use it for close-up images or landscapes. X-sync speed refers to the fastest shutter speed your camera can use with a flash without causing dark areas in the image. If you move any faster, the flash may not expose part of the frame! Yellow filter is one of the most popular types of color filters in black and white photography. When shooting monochromatic pictures, photographers use color filters to block specific colors from reaching the sensor and modify the images tonal qualities. Source: pexels.com A zoom lens is one that has a variable focal length. This allows a photographer to capture a wider or narrower field of view of what they are photographing. These lenses constrain arrays of glass elements to produce high-quality images. Optical zoom is achieved by using a zoom lens. Digital zoom is achieved by enlarging a portion of an image and producing lower-quality results than using a zoom lens. The zone system helps photographers control their exposure by breaking tones down into zones from black to white. This system also gives instructions for how to capture and print each of the details. Source: pexels.com AE Auto ExposureYour camera will automatically set the exposure so that your image isnt too dark or too bright. AWB Auto White BalanceYour camera will set colors automatically to ensure that whites appear white under different lights. DNG Digital NegativeThis is Adobes RAW photo format. The DNG keeps all of the information about the image so you can edit freely later. EV Exposure ValueEV indicates how bright or dark the image appears. You can use EV to get your images lighter or darker. FPS Frames Per SecondThis indicates how many images your camera is taking per second & is a necessary measurement in video or action shooting. IBIS In-Body Image StabilizationYour camera reduces blurriness by stabilizing the image in the camera body, this becomes especially useful when shooting handheld. PPI Pixels Per InchPPI indicates how sharp an image looks when printing an image. More pixels make for sharp prints. UHD Ultra High DefinitionUHD provides ultra-clear/sharp images or video quality, which is highly high resolution. You might also like: Easy & Quick Guide To Make DIY iPhone Tripod in Half a Minute! Q.1 Why should I be aware of what the different photography terms mean? Ans. Knowing photography terms will help you advance your photography skills, and also to explain your situations with photographic techniques when conversing with photographers. You will also be able to apply the camera settings better. Q. 2 Do only professional photographers use these photography terms? Ans. Not at all! These terms help beginners, hobbyists, and professionals. Q.3 Can we use these terms in smartphone photography and DSLR photography? Ans. Yes! Lots of terms such as exposure, composition, and white balance terms apply to all types of photography, digital or analog, and of the smartphone variety, as well. Q.4 Where can I find more resources for learning how to photograph? Ans. You can find photography courses online, blogs, video tutorials, and practices.

Photographer terms. Photography analysis terminology. Photography terms pictures. Photography terms explained. Photography analysis words. Analog photography terms. Photography analysis example.