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Photo 10 & 14 Photography Definitions

ABSTRACT: In the photographic sense, an image that is conceived apart from concrete reality, generally emphasizing lines, colors and geometrical forms, and their relationship to one another.

APERTURE: A circle-shaped opening in a lens (a hole, really) through which light passes to strike the image sensor or the film. The aperture is usually created by an iris diaphragm that is adjustable, enabling the aperture to be made uniformly wider or narrower, thereby letting in more or less light. The size of the aperture is expressed as an f-number, like f/8 or f/11.

BALANCE: Compositional harmony of a scene based on the placement of elements of different sizes, shapes and colors.

BARN DOORS: "Gobos" (light-blocking devices) that attach to studio lights and swivel on hinges (like the doors on a barn) to allow the photographer to control the light's direction and the width of the light beam.

BIT: From *binary digit*, is a basic unit of data storage, and has a value of either 0 or 1.
Eight bits = one byte (*See "Byte" below*)

BIT DEPTH: Determines the maximum number of colors that can be displayed at one time. Bit depth is the number of bits per pixel, which determines the number of colors that the image can display. The minimum requirement for a color photograph is eight bits per pixel.

BLEED: Describes a photographic print that extends to the edges of the paper (beyond the trim marks on a page) and has no visible border or defined margin area.

BLUR: Denotes a photograph in which movement, either camera movement, zoom lens movement or movement within the scene (e.g. a subject in motion), is recorded at a slower shutter speed than is necessary to "freeze" the motion as a sharp image. Blur is often intentionally created by a photographer who wishes to convey a sense of motion.

CHROMATIC ABERRATION: Color fringing that occurs when a lens does not focus different wavelengths (colors) of light equally.

CMYK: An acronym for the ink colors used in four-color process printing - *Cyan* (process blue), *Magenta* (process red), *Yellow* and K*ey* for black. (Some folks incorrectly believe the "K" refers to the last letter in *Blac*K). The primary colors of light (*not* of the inks used in printing) are *red, green* and *blue*, known by the acronym RGB.

COLOR GAMUT: (1) the definitive, complete range of colors in photography and image-editing that can be accurately represented in a particular situation, such as within a certain color space, or (2) the complete range of colors in an image.

COLOR TEMPERATURE: The light spectrum is scientifically described in terms of color temperature, and is measured in degrees Kelvin (°K). Photographers use three standard light color temperatures. The first is called "daylight" for natural outdoors light (5500 degrees K), while the other two are incandescent (artificial light) color temperature standards: 3200 °K (tungsten studio lamps) and 3400 °K (photo lamps or photofloods).
COLOR MODE also known as Image Mode - Similar colors in an image are represented differently in different color modes. RGB - *Red, Green Blue* - (millions of colors for use on the internet including in emails to reduce file size

while maintaining color integrity), CMYK - *Cyan, Magenta, Yellow, Black* - (four colors required for printing in full color), Greyscale essentially 256 grays between black and white), and Bitmap two colors) are the four most common ways in which an image represents the colors it contains. Color modes determine how an image will be represented on a computer monitor or when being printed. An image's color mode determines how colors combine. Different color modes result in different levels of color detail and file size.

COMPOSITE PHOTOGRAPHS: Also called *photomontages* or *montages*, are made by combining pictures from different sources into a single image.

DEPTH OF FIELD: The range of distance in a scene that appears to be in focus and will be reproduced as being acceptably sharp in an image. Depth of field is controlled by the lens aperture, and its area of acceptable focus extends for a distance in front of and behind the point on which the lens is focused (i.e. the plane of focus).

DEPTH OF FOCUS: A zone of focus in the camera. If an image is focused on a ground glass screen in a camera, depth of focus makes it possible to move the screen slightly backward or forward and still have the image in acceptable focus.

DPI - *Dots Per Inch*: (1) Printer - A measure of print resolution, that is, the number of dots of ink per linear inch of an image. The greater the number of dots, the higher the image's resolution. (2) Scanner - A scanner's maximum resolution is measured in dots per inch. When the number is high, the scanner can scan more data from an original image, increasing the scanner's output quality. (3) Images - When the spatial resolution of pixels in an image is altered, a digital image can be made larger or smaller. This is usually referred to as PPI [pixels per inch].

DROP SHADOW: An effect in which an image appears to be slightly raised as if floating, caused by a shadow below it that is offset to one or two sides.

ENVIRONMENTAL PORTRAIT: A portrait in which the subject's surrounding environment is also included in the photograph.

FILE FORMAT: The standard way in which a digital image is encoded for storage, dependent upon the proposed use of the image, such as print, email or web viewing. Various formats (e.g. .JPEG, .TIFF, .PSD, etc.) have different characteristics.

FILL FLASH: Flash that is used in a supplementary manner to fill in a subject's shadow area with light, thereby reducing contrast. Fill flash is generally not intended to overpower another light source, but rather to bring out detail that would otherwise be lost in shadow. Also known as "flash fill" and "fill-in flash."

FLARE: Light that doesn't belong in an image, often taking the shape of the aperture, generally caused by shooting towards the light source. The source may appear in the image as a reflection from the interior of the camera or from the lens. Flare often results in an overall reduction of image contrast. Attaching a lens hood can help avoid flare.

FONT: A typeface's style, including the *weight* and size of the letters.

FULL FRAME: A camera's sensor that has the same dimensions as a 35mm film frame - roughly 24mm X 36mm**.**

GAMUT: A color gamut in photography and image-editing is (1) the definitive, complete range of colors which can be accurately represented in a particular situation, such as within a certain color space, or (2) the complete range of colors in an image.

GAUSSIAN BLUR: In image-editing software like *Adobe Photoshop,* Gaussian Blur blurs a digital image according to a radius value (e.g. 5 pixels) that you select in advance. It blurs incrementally across the object to be blurred, providing a pleasant and realistic softening effect.

GOBO: A light-blocking device that falls under the general category of "Grip equipment." Generally used in a studio to prevent illumination from a studio light striking a portion of a scene. A "gobo" can be a simple piece of opaque cardboard or a sophisticated material in a specific shape, often a rectangle or square. "Barn doors" are gobos.

GOLDEN HOUR: The time an hour or less before the sun goes down and around fifteen minutes after the sun has set. Sunlight is usually warmer and more complimentary to skin tones at this time, and the angle of the light can provide depth to portraits and landscape photography. This quality of light is also sometimes referred to as "Photographer's light."

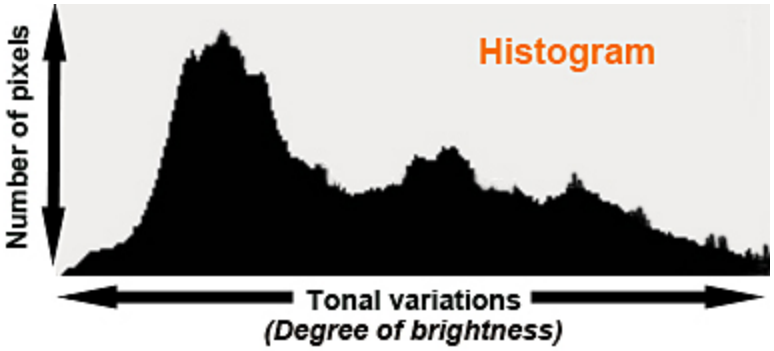
GOLDEN MEAN: Also referred to as the "Golden section" and the "Gold mean," the Golden mean is an ancient fine arts formula that mathematically defines a rectangle of specific proportions. This rectangle, called the "Golden rectangle," is believed to frame objects in pleasing proportions.

***|*GRAY CARD**: Also known as the "Kodak neutral test card," a gray card is an 8" X 10" (20 cm by 25.5 cm) card, about 1/8" thick, that is uniformly gray on one side. The gray side reflects precisely 18% of the white light that strikes it (corresponding to the calibration of a reflected-light meter). It is uniformly white on the other side, which reflects 90% of the light.

HARD COPY: Generally refers to a printed copy of material that is electronically stored, such as on a computer. A photographic print of an image appearing on the internet is, for example, a hard copy.

HEADSHOT: Photograph, often in black-and-white, of a person's head and shoulders. Promotional headshots of performers and models are traditionally printed in 8" by 10" size.

HIGH KEY: An image that is mainly made up of light tones, which relatively few mid-tones or shadows



HISTOGRAM: a bar chart graph that shows all of the tones in a digital image. A photographer can use a histogram to understand and manipulate exposure. Many digital cameras have the ability to show the photographer a histogram of an image he or she has taken. Most image editing applications can create a histogram for an image. A well-exposed photograph will appear as a bell curve, with lower values at the dark and light ends. If the image contains a deep shadow area, there will be high values at the dark end of the graph indicating loss of shadow detail. If there is a white area in an image, there will be high values at the light end, implying loss of highlight detail. If there is nothing shown at the dark and light ends, the photo lacks contrast.

INTERPOLATION: The procedure of adding new pixels to a digital image between the image's existing pixels. Interpolation software analyzes the adjacent pixels to create the new ones when enlarging an image file. The objective is to increase the size of an image while maintaining its resolution by creating new pixels that fill in the gaps between existing pixels, all the while comparing the values of the new pixels with those of adjacent pixels. (See Bicubic interpolation - the best type of interpolation.)

INTERVALOMETER: A camera's device that takes a number of consecutive exposures at set intervals for time-lapse photography. Some cameras have built-in intervalometers; others can be fitted with an accessory intervalometer.

INVERSE SQUARE LAW: An equation that relates the intensity of a light source to the illumination it produces at a given distance. Light diminishes over distance in accordance with the Inverse square law, which states that doubling the flash-to-subject distance reduces the light falling on the subject to one-quarter.

K : Abbreviation for Kelvin.

KELVIN or KELVIN SCALE: The visible light spectrum is scientifically described in terms of color temperature, and is measured in degrees Kelvin (°K).

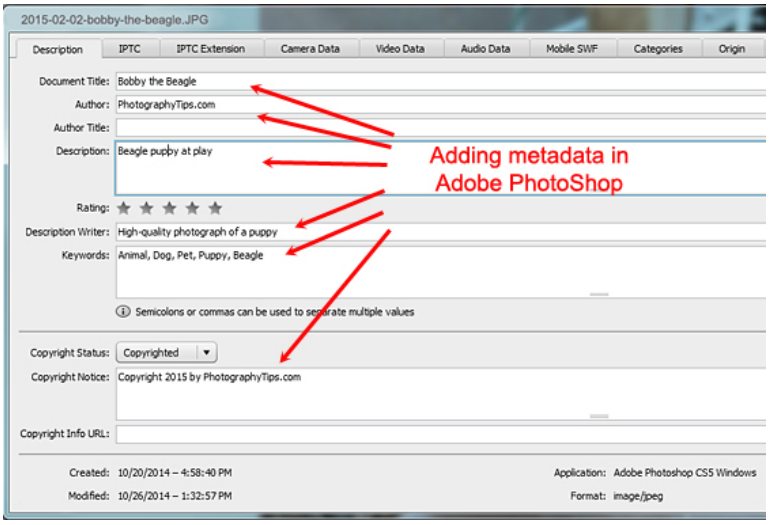
KICKER: (1) A side or back light often near lens height used to rim faces and model profile shots. (2) A light used to provide an additional highlight or accent on a subject.

LAYERS: Images edited in *Adobe Photoshop*, *Paint Shop Pro* and similar image-processing applications may be made up of a number of layers, each of which contains part of the image. A layer is one image among a stack of others. When the layers are combined (or stacked together), a single image results.

LEADING LINES: Lines that direct the viewer's attention to an image's center of interest.

LIGHTING RATIO: The brightness of the main light (key light) compared with the brightness of the fill light(s). A ratio of about 3:1 is normal for photography. It can also be described as the measurement of the degree of contrast between the shadow side and the bright side of your subject.

LIGHT TENT: Translucent fabric attached to a frame that surrounds a subject. Typically used to reduce reflection from highly reflective subjects. The light source is outside the enclosure, but the lens pokes through a hole in the fabric.



Some metadata can be edited, permitting the addition of keywords, copyright info and more.

METADATA: Data about a digital image that explains, describes or locates the image and is embedded in the image file, but is not data forming the image itself. The information includes such items as camera model, lens type, exposure settings and more. Some metadata can be edited, permitting the addition of, say, copyright information.

MODELING LIGHT: A tungsten light built into a studio flash that remains on while the flash is in standby mode, permitting the photographer to assess highlight and shadow areas that will be created when subsequently exposing the film or the digital sensor in the brighter light of the flash. The modeling light also provides enough light to permit focusing.

MODEL RELEASE: A contract in which a model consents to the use of his or her images by the photographer or a third party. Sometimes referred to simply as a "release."

MOIRÉ: Pronounced *Mwa-ray*, a pattern of light and dark colors or bands created when two repetitive patterns that differ in orientation or frequency are superimposed in an image.

MONITOR CALIBRATION: Changing a monitor's adjustment to accurately display colors.

NEWTON RINGS: Color spots that may appear on slides mounted between glass surfaces, caused by contact of the smooth glass surface with the smooth film base.

OPEN UP: Increase aperture size to permit more light to reach the film or image sensor. If you change your lens's aperture from ƒ/11 to ƒ/8, a larger opening, you have opened up by one stop.

PAINTING WITH LIGHT: Occurs when the photographer incrementally lights an otherwise darkened scene using a handheld flashlight or other small light source while the shutter remains open during a time exposure. The light is added to the scene in the manner of an artist using a “paintbrush of light”.

PDF: (*Portable Document Format*) - an image file type created in Adobe PhotoShop that results in pictures that are viewable with Adobe Acrobat, so someone (Mac or PC-user) who doesn't have PhotoShop can still view the image. It is often used in forms creation and for documents that require their layout, fonts and images to appear unchanged from the original.

PINCUSHION DISTORTION: A type of lens distortion that occurs when the edges of a photograph bend inward. It is most easily noticeable when straight lines in a scene are distorted towards the center of a picture of the scene.

PIXEL: Abbreviation for "picture element", a pixel is a small square of colored light that forms a digital image. It is the smallest unit in a digital image. Think of a pixel as a single small tile in a large mosaic.

PIXELATION or **PIXELIZATION:** Occurs when the pixels in an image are noticeably visible. The effect can be seen when a small image file is grossly enlarged beyond the number of pixels needed for a sharp image.

PLUG-IN: When referring to a digital image-editing computer application (such as *Adobe Photoshop*), a plug-in is a software addition to the application that enhances its capabilities, typically to create visual effects or to increase the range and/or types of the application's image-processing filters.

PNG: Pronounced "ping," stands for "Portable Network Graphic" format. It is characterized by its ability to compress image files without a big quality reduction. PNG was developed to replace GIF and JPEG formats on the internet, but it doesn't appear to have caught on to any great extent.

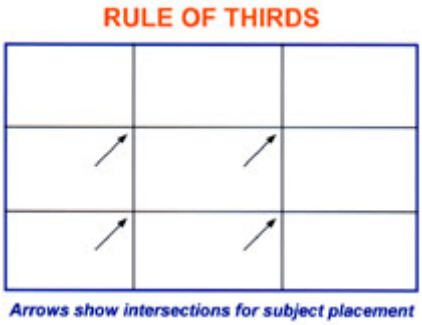
PORTRAIT: A picture of a **person or persons** that captures their likeness, especially their face.

PSD: (*PhotoShop Document*) is an image file type created in Adobe PhotoShop. It is uncompressed and contains data on editing that is done to the image. A PSD file is essentially PhotoShop's version of a TIFF file. It lets you save a picture you are working on with its layers, channels and other image-editing data intact. PSD files must be converted to another image file type before use

RAW: Sometimes called *camera raw, raw format, raw image format and raw*. A digital image storage format that contains the most information possible from a camera's sensor, with 12-bit color information , a wider range of data than 8-bit formats such as JPEG. A RAW image file has had little or no processing applied to it by the camera's software. Since RAW data is unprocessed, some photographers consider it to be the digital equivalent of a negative or a slide.

RGB: An acronym for the primary colors of light, ***R**ed, **G**reen and **B**lue*, used to produce all other colors.

RGB MODE: The standard mode employed by digital cameras for taking and processing of images.



A good rule for subject placement that generally results in a pleasing composition.

RULE OF THIRDS: The rule of thirds is a design principle based on a photographer/artist visualizing both the vertical and horizontal division of a composition into thirds, and then placing the subject where the lines intersect.

SELECTIVE FOCUS: Employing shallow depth of field through the use of a wide aperture so that the properly-focused subject is isolated from its surroundings because the surroundings are purposefully not in focus.

SET: A specific area in which objects and persons are photographed - generally in a photo studio - and comprised of a backdrop and props.

SHADOW DETAIL: Detail that is visible in an image's darker areas.

SHARP: When describing an image's general appearance, "sharp" refers to a crisp, properly-focused picture, the opposite of one that is fuzzy and unfocused.

SHARPENING: Increasing a digital picture's apparent sharpness using an image-editing program.

SHARPNESS: An image's degree of clarity in terms of focus and contrast

STITCH: To join together one or more pictures, usually to make a panorama. A "stitched" or "segmented" image involves taking two or more photographs of a scene from the same camera position, with the camera rotating on a

single axis and with each image (segment) partially over-lapping another so they can be joined together ("stitched") on your computer using image-processing software, resulting in a single extra-wide or extra-tall picture

TEARSHEET: A copy of a published page (magazine or newspaper) in which a model's picture appears. tearsheets are generally included in a model's portfolio as evidence of work the model has done.

TWAIN: *Toolkit Without An Interesting Name* - The software equivalent of a travel plug adapter permitting a TWAIN-compliant digital camera or scanner to "bridge" or communicate with, for example, an image-editing program on a computer.

WHITE BALANCE: A digital camera analyzes a scene using its white balance mode to determine areas that should be recorded as pure white. The camera adjusts the overall scene's color balance so that the areas meant to be reproduced as white in the picture will be white, thereby also adjusting all the other colors in the scene using the same color shift values, so that all color is accurately represented. A digital photographer can usually set the white balance to suit the color temperature of the light falling on the subject. Some cameras can automatically set white balance.