

35mm

This refers to the size of the film used, NOT the camera. 35 Millimeters is the diagonal width of the film and will yield a 4"x 6" print. Other sizes are measured differently depending on the country that develops them or even the whim of the manufacturer. Other sizes of film are 6.45, 6.6 and 6.7 (in centimeters, measured on the sides) 4X5 and 5X7 and 8X10 (all American and measured in inches on the sides)

Aperture

The amount of light let onto the film. On many cameras this is either automatic or is a fixed value. It is controlled by a device called an Iris located in the lens of the camera. Used mainly to control Depth of Field (how much of a scene in focus, front to back) and flash exposure. Aperture is expressed in F-stops which are numbers ranging from F1 to as high as F64

APS

(Advanced Photo System). When you take a picture with an APS camera, you can choose 3 different formats (picture sizes). In addition, the upper level cameras record exposure data and a magnetic strip on the film. This data can be used by the processor (in theory) to reproduce in the printing process the conditions that existed when you took the picture. The negatives for this format are smaller than 35mm due to the section devoted to the magnetic strip. Also you don't generally get prints back, rather, you get a proof sheet of your photos and the negatives. (you can then pick the images you want to enlarge). There are devices you can buy (expensive) to scan your pictures directly into your computer.

Capture Device

The digital equivalent of film, capture devices can be either CCD (charged coupled device) or CMOS (charged metal oxide semi-conductor). CCD is the most common, although they need to have some form of noise reduction, particularly at long exposures. Noise reduction circuitry is not always available in lower priced cameras. CMOS does not generate noise but tends to be a more expensive option.

Digital Cameras

These are cameras that use digital media instead of a chemical film. The advantage is total privacy in the photo process assuming you don't SHARE your images. Also the images are easily transferable to a computer. Digital cameras now equal 35mm at fairly reasonable prices. There are some drawbacks, menus on top of menus, and in SLR's (cost, lens magnification) but overall digital will only get better.

Film Speed

Expressed in either ASA or ISO is a measure of how long light has to expose film to get an acceptable image. Typical numbers are 100, 200, 400, 800 and 1600 in ASA. Every time the number doubles the amount of light needed is halved. While it used to be true that slow (lower numbered) film gave the best results (and to some degree still is), photographers regularly use the full range of speeds to get the results they want and to make their lives easier.

Flash

While most people know what a flash is, knowing what a flash does helps in getting better pictures. Basically, a flash is an electronic strobe light that turns on, illuminates a scene, and turns off when the amount of light is enough to expose the film. Although that sounds simple it can be accomplished in a number of ways (thyristor, TTL, silicon diode etc). Despite the electronic terminology, all of those methods are designed to tell the flash when enough light has hit the film, at which point the flash shuts off. You don't notice this because it happens between one thousandth and a twenty thousandth of a second, or even faster for special applications. Control is accomplished either in the flash itself or by the camera metering system. One common problem, under exposure, happens because light from the flash either hits and reflects off something closer to the camera than the intended subject or because something in the picture is much brighter than the other elements of the photo. Either situation causes too much light to enter the flash control too soon and causes the flash to shut off prematurely. If you have an underexposed shot, look for a very bright object on the picture and that's your culprit. If you don't see that, then check the camera settings and flash connection (if it's separate), if everything appears OK then you either have a bad flash, unlikely if the other pictures on the roll are good, or you are a victim of the nasty photographic gremlins that get everyone.

Latitude

This refers to the amount of under or over exposure that a particular film can take and still yield an acceptable image. What constitutes acceptable is subjective although there are standards by which latitude is determined. Modern print film has very wide latitude (usually 1.5 to 2 f-stops). Slide (transparency) film is much narrower (.5 stop). Translated into English what this all means is that a wide latitude film is more forgiving of light conditions that are less than ideal (a common problem in scene photography) or camera settings that are less than exact. By the way don't walk into your local drug store and ask for a film with wide latitude. The person behind the counter will just stare at you.

Most modern digital capture devices have a fairly wide latitude, but generally, you will need *photo editing* software to take advantage of that.

Lens

Probably the single most important thing in photography, both film AND digital, is the lens. Everything that happens on the film or CCD happens because a lens focuses and controls the light hitting it. No matter what kind of whiz-bang technology you have (advances in metering are the most whiz-bang), it matters not a wit if the lens is not up to speed. While point and shoot cameras have come a very long way the cheaper among them often use plastic lenses, VERY BAD. Purchase a camera with a glass lens. If I had to make a choice between high tech and a good lens I'd pick the lens. In fact, there are photographers that buy particular makes of cameras JUST to get the lenses that the company makes.

Manual

Little book that came with your camera. Nobody reads them. BUT I'M NOT BITTER!!!!!!!!!!

Metering

The measuring of light in a camera to determine proper exposure for the film you are using. (short answer) Metering is based on a calculation called the sunny sixteen rule (“perfect” exposure = f16 @ 125th second at ASA 100 in bright sunlight). The formula is adjusted for different film speeds. When you adjust the camera, you are changing parameters until the meter output matches the above rule. All metering uses this basic principle. The area of the scene that is measured can vary though. Spot (1% of the scene) Average (bright and dark areas all averaged together) Center Weighted (average with a bias on the center) and multi segmented. Multi segmented metering simply divides a scene into zones and measures each one individually then applies formulae to come up with an over-all exposure.

Photo Editing Software

Photo software is a must for digital and is pretty useful for print photography also. It can help rescue a poor photograph and make a good image better. There is an old darkroom saying that still applies though, “the best darkroom technique won’t make a bad image great” The better image you have to work with, the more software can help you. The best program is Adobe’s Photoshop. It is pretty expensive though, so another option is Photoshop Elements, a stripped down version of the full program that is still very powerful and can be had for around \$70.00. It often comes bundled with new digital camera’s. There are other’s but I have never used anything better than Adobe products.

Point and Shoot

Describes a fairly easy to use, mostly automatic camera. These are typically rangefinders, meaning you don’t actually look through the lens. This isn’t usually a problem unless you are very close to your subject. Point and shoots vary in quality but a good one will cost around 150 to 250 dollars. They are also available used and some real buys can be found. Although there are some excellent fixed focal around (one single focal length), a zoom lens model gives you more options and creative choices. There are many options available beyond the type of lens. A reputable camera store can help you sort through them all although I want to be there when you tell them what you are taking pictures of.

Polaroid

The alternative to the Kodak process (a developed film yielding either a negative or slide). Polaroids develop in their own chemical pouch. A true Polaroid has no grain (negative film uses very tiny grains of silver and other emulsions that change in response to the light they are exposed to, if you enlarge a print from a negative enough you will begin to see clumps, or grain, you will also notice this in underexposed photos that you try to lighten) and in theory can be enlarged infinitely. The stuff of instant camera’s is not the true Polaroid process but rather a chemical shortcut in the process, and give’s fairly poor enlargements (as well as having to be sent to the factory to have this done) as well as poor quality overall. And no matter what the salesman tells you the cost per print is more than the cost of negative film plus developing.

Print Film

Film that will yield either a black and white or color negative (reverse image) . That image is then printed onto a photo sensitive paper to give a finished positive print or enlargement as the case may be.

Red eye Reduction

Gimmick used to sell cameras. Red eye reduction allegedly works by firing a pre-flash before the actual full power flash. Supposedly this will make the pupils of the eyes smaller thereby reducing red eye. Red eye is actually the reflection of blood in your eye so that's why the above is supposed to work. So instead of big wide red eyes you get little beady red eyes. The ONLY true way to get rid of red eye is to move the flash away from the lens axis. Translation: increase the angle between the lens and the flash, move the flash off camera. Imagine pitching to a big league hitter who hits a line drive back at you (flash next to lens) you die. Now imagine the same thing resulting in a pop fly (flash away from lens) you don't die. If you can't move the flash off camera, try turning on all the lights in the room. You'll get a more natural look (not the fly on a pin look) and you will reduce, but probably not eliminate, red eye.

Shutter speed

Controls the amount of time light falls on the film. Fast shutter speeds freeze motion. Slow speeds blur motion. A fast speed can freeze a runner in mid-stride. Slow can give water a dreamy/tranquil look. Higher shutter speeds can also stop camera shake. This is caused by using a too slow speed, about a sixtieth of a second. There is a catch to this unfortunately , the longer focal length you use the more camera shake becomes a problem. The basic rule of thumb is to never handhold at a speed less than one over the focal length. Translation: if you use a 300mm lens don't shoot at less than a 300th of a second,. 150mm not less than 150th of a second etc.

SLR

Single Lens Reflex camera. When you look through the view finder of this camera you are seeing pretty much what the lens is seeing (you don't see the full view if the lens, there is some cutoff. This varies with camera brands and designs but typically you see about 90 to 96 percent of the viewable area). The primary advantage of an SLR is the ability to change lenses and the staggering array of lenses available. Some SLR's may come with an attached flash but all will also accept a separate flash which gives a lot of versatility. SLR's aren't limited to 35mm either. Most medium format cameras (6.45 and up {see above}) are also SLR's with some notable exceptions. Many of the other features that used to be exclusive to the SLR market can now be found in better point and shoot rangefinders. But the lens and flash interchangeability still make them the cameras of choice for serious photography and photographers. By the way, the "reflex" in single lens reflex, refers to the mirror inside the camera that allows you to see the image. The mirror would be in the way (the film plane being behind it) so when you take a picture the mirror flips up or *reflexes* out of the way.

Transparency (slide) Film

This is film that, upon development, yields a positive image. Transparency film gives the best results of any chemical process. The color is brilliant and has an almost three dimensional look. However, nothing comes without some cost. Transparency film has very narrow latitude (see above). It also has to be projected (with the exception of view camera film which is staggeringly expensive, you if have a view camera, can I be your friend?) so there is the cost of the projector. Finally, quality prints from a slide are VERY expensive (plan on twenty dollars for cibachrome to two hundred fifty PLUS for a four color separation dye sublimation print...even the name sounds expensive) But I can safely say that virtually EVERY magazine ad you have seen or photo spread you have enjoyed (*Sports Illustrated* being a notable exception) was shot on transparency film although now Digital is starting to supplant Transparency's dominance.

TTL

Through the Lens. This refers to a form of metering where the light is measured inside the camera. In an SLR the mirror has a section that is half silvered (in you look you can see this, assuming you have a TTL camera). Light passes through this section to a meter behind and below the film plain. TTL is very accurate but an even newer technology is call TTL-OTF (Through The Lens - Off The Film). This is supposed to measure the light falling *directly* on the film. It is very good but I would defy you in most situations to tell the difference between the two methods. Another new kid is TTL Multi-segmented Evaluative Metering. This still is based on the sunny 16 rule, but looks at multiple points in an image and uses fuzzy logic algorithms to come up with an exposure setting. Don't be fooled by the tech talk though, exposure still comes down to two numbers, aperture and shutter speed for now. Non-linear capture devices may be a reality someday.

Zoom Lens

A type of lens that changes or "zooms" it's focal length. Typical zooms go from wide angle to telephoto. Specialty models can have ranges that vary considerably from the norm. Zoom lenses are a good choice if you have a budget, because they can give you the use of several lenses for the price of one. The problems (aren't there always problems?) are that by and large they are more expensive then fixed lengths, but at the same time, one zoom should cost far less then equivalent number of fixed lenses. They also tend to need more light for a given exposure (with some VERY expensive exceptions), but with flash or adequate light they are an excellent choice.