



The dPS Ultimate Guide to Photography Terms

A Glossary of Common Words and Phrases



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I often hear various complicated terms and important-sounding photography words being tossed around when I visit online photography forums, watch camera review videos, and chat with other photographers over coffee or at the playground while our kids bounce around on the jungle gym. When I was first getting started in photography all these strange dictionary items confused me to no end. Sometimes it seemed like the more time I spent searching for answers the more confused I got. What's more, some people seemed to place an inordinate amount of meaning and importance to a few things that other photographers mostly ignored.

To help make sense of the deep, complex waters of picture taking I thought it would be worthwhile to put together a glossary of common photography terms. Along with real-life definitions, I hope to provide new photographers and even seasoned shutterbugs a bit of a lighthouse by which to navigate. Here, in alphabetical order, are some of the most common words and photography terms you may hear along with definitions that are designed to clear things up, not cause greater confusion.



This is called a macro photograph. Want to know what that means? Read on to find out.

Photography

Let's start with the word photography itself, which has an interesting background. The word "photo" comes from the Greek word meaning light, and the word "graph" is derived from the Greek word meaning drawing. So photography is essentially drawing with light. The process involves capturing light with a physical medium such as film, or through electronic means with a microchip, in order to create an image that can be stored, shared, and reproduced. Light is focused by the use of a lens, which contains several glass elements arranged in a specific way so as to obtain a sharp image, and projected onto the capturing medium.

AEB or Auto Exposure Bracketing

Most of the time your goal is to capture an image that is properly exposed - that is, not too bright and not too dark. However, there are times when you might want to intentionally make a few different images of the same scene; one that is too dark, one that is too bright, and one that is, as Goldilocks might say, just right. AEB or Bracketing is one way to do that. Using this technique or setting on your camera, it will take a series of images that are under- and overexposed. You can then combine the images afterward in software like Lightroom or Photoshop to get the best parts of each of them into one finished picture.

Aperture

The aperture is the opening in your camera lens. The bigger your aperture the less light you need in order to take a picture or the less time your shutter will need to stay open in order to collect enough light for the picture.

Think of two buckets sitting in the rain, each with a base 10cm in diameter. One also has a 10cm opening on top, while the other narrows to a 1cm opening. Which one will fill with water first? The bucket with a 10cm opening, just like a lens with a wide aperture will let in light quicker than a lens with a small aperture.



To find the biggest aperture possible on your lens, look for a number on it that says something like $f/3.5$ or $1:2.8$. Ironically, when measuring aperture size, a smaller number is better so a lens with an aperture of $f/1.8$ has a larger maximum opening than a lens with a maximum aperture of $f/4$. If your lens shows multiple values like $f/3.5-5.6$ it means the biggest possible aperture when zoomed out is $f/3.5$ and when zoomed in is $f/5.6$.

For more on aperture read: [Seeing in Depth of Field: A Simple Understanding of Aperture](#)

Aperture Priority

Put your camera in Aperture Priority Mode (on Nikon cameras, turn the top dial to A, on Canons and others turn it to Av) and you can then set your desired aperture while your camera figures out the shutter speed and ISO required to have a properly exposed picture.

Note: the camera will only choose the ISO for you if you are using Auto-ISO. If you do not you will need to select that also.

Want to take photos of your kids with blurry out-of-focus backgrounds? Put your camera in Aperture Priority, zoom all the way in with your lens, and turn the dial so the f-number is as small as possible. Now focus on your kids and snap away.

Want to take tack-sharp landscape photos? Use the same mode but zoom out with your lens and set the value to f/8 or f/11 so the opening is very small and most (or all) of your image will be in focus.



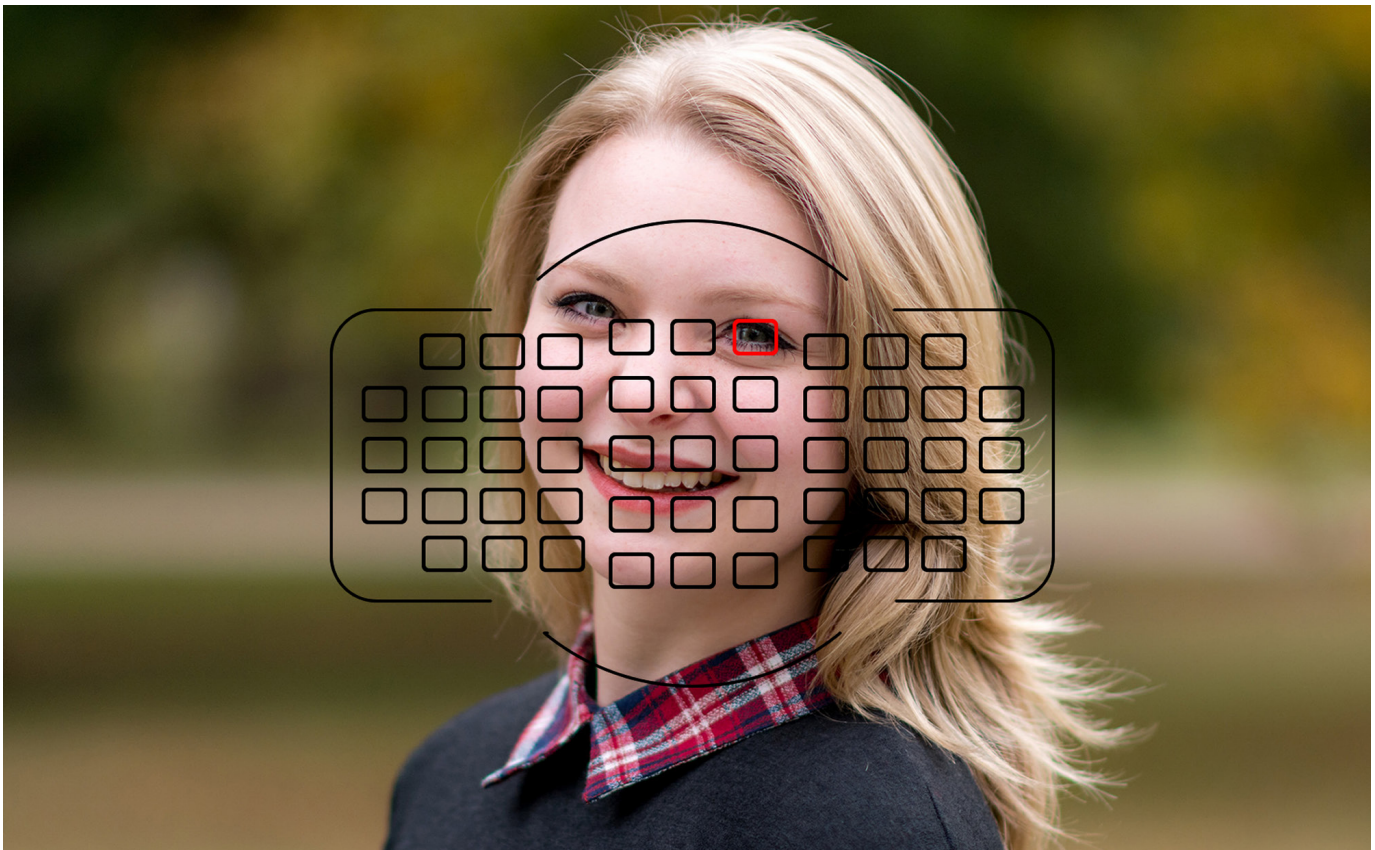
Shooting in Aperture Priority allowed me to select just the right aperture while letting my camera figure out the shutter speed and ISO.

For more on using Aperture Priority read: [Getting off Auto – Manual, Aperture, and Shutter Priority modes explained.](#)

Autofocus Points

Autofocus points are all the tiny little dots or squares you see when you look through the viewfinder. Some cameras have a lot, some don't have very many, but for practical purposes, the quantity doesn't matter. If you are comparing cameras and one has 29 AF points while another has 99 AF points, both are perfectly capable of taking great pictures, though the latter will simply give you a little more flexibility.

Depending on whether you shoot portraits, landscapes, action, pets, food, or anything else, the ability to select your AF points can be really useful. You can tell your camera to use all of the AF points, just one specific point, or focus using a group of points (zone or area focusing).



Caption: You can use your camera's autofocus points to select a specific spot on which to focus, such as your subject's eye when taking a portrait.

For more on autofocus points read: [Understanding Normal and Cross-Type Focusing Points](#)

Back-Button Focus

On most cameras, you press the shutter button down halfway to make it focus on your subject. But instead of doing this you can also set your camera to use a button on the rear of the camera, that you press with your thumb. It sounds a little counterintuitive and feels funny at first, but it's a nice way to give yourself more control over your photography.

Sports photographers and those doing night photography or portraits often use this technique. Find out more about back-button focus here: [Back-Button Focus: What it is and why you should try it.](#)

Bokeh

Bokeh is a fancy name for the blurry, out-of-focus, areas of a picture. For maximum bokeh use a wide aperture, get very close to your subject, and ensure the subject is far away from the background.



Bokeh is what's known as the blurry out-of-focus areas in the background (or sometimes foreground) of an image.

BULB Mode

This is a setting on your camera used for really long exposures. When in BULB Mode, your camera will open the shutter when the shutter button is pressed and then closes it when the button is released. If you're going to use this mode, it also helps to have some type of remote or cable release attached to your camera so it doesn't pick up vibrations from your finger when you press the button.

Burning

Burning means to selectively make parts of a photo darker. The name comes from techniques used on photographic negatives in the days of printing in a darkroom, but now it's usually just done in Photoshop, Lightroom, or another image processing program.



The left side of this image shows the original, and the burning technique was used on the right to make some areas darker and give the photo added contrast.

For more on burning (and dodging) read: [What Are Burning And Dodging And How They Can Help Your Photos](#)

Chimping

Chimping is checking your photos on the rear LCD screen of your camera constantly, often for no particular reason. It's not a bad habit per se, but if you learn to stop doing this you will probably start to trust your instincts more and pay more attention to what's in front of your camera rather than what's on the screen.

Try disabling the auto-review function on your camera and only review your images purposefully when you think you really need to (to check exposure, composition, etc.). Doing so can be a bit like jumping into the deep end of the pool to learn how to swim, but it can be incredibly rewarding.

Chromatic Aberration

The lens in your camera works by focusing incoming beams of light. However, sometimes the different colors of light behave a bit strangely due to how different lenses are constructed. This can result in a phenomenon called chromatic aberration. This can happen not just with cameras but on microscopes, telescopes, and pretty much every situation in which light is manipulated by a lens. When it happens you will notice weird purple or green fringes along the edges of objects or blurry areas near the edge of the frame. It's especially prominent when shooting with wider apertures but can easily be corrected with software tools like Lightroom or Photoshop.

Read more about this topic here: [Chromatic Aberration – What is it and How to Avoid it.](#)

Clipping or the Blinkies

Most images can be edited in software like Lightroom or Photoshop. But if there are parts of an image that show up as blinking spots when you look at the back of your camera, there means there is no data available to edit in those spots. It simply does not exist!

On the histogram, this shows up as parts that are too far off the right or left side, and those parts of the image are so over- or under-exposed that you can't recover anything. This is a notice for you to review your exposure and adjust if you deem necessary to retain detail in those areas.

Composition

This term refers to the entire picture's content. The composition encompasses what's in your image, what's not in it, your angle of view, your focal length, the desired amount of bokeh, and the whole photo including the kitchen sink. (Especially if you're taking a picture of a kitchen sink.) Pictures with good composition have elements that work together to form a complete image and story: the subject, foreground, background, and everything else all just fit together.

Well-composed images may also use techniques like leading lines to direct your eye to a particular part of the picture. Good composition not only takes time and lots of practice, but studying the works of other photographers along with painters and illustrators who have been creating art hundreds of years before photography even existed.



Composition refers to the entire picture, not just the subject. Pay attention to the light source, background elements, and other things like leading lines in order to get a pleasing overall composition.

For more on composition, check out [the many articles on this topic](#), here on dPS.

Crop Sensor

The physical size of the sensor in most cameras is not as large as a piece of 35mm film, so it's called a crop sensor because it's smaller. Crop sensors are usually about 22 x 15mm, whereas full-frame sensors are 36 x 24mm. Lenses on crop sensor cameras behave a little differently than on full-frame cameras. Any camera you buy today with a crop sensor is going to be perfectly fine for just about any shooting situation. Unless you are a professional who makes a lot of money with your camera (and needs the highest image quality and largest files possible), you can be perfectly happy with a crop sensor model.

DSLR

This acronym stands for Digital Single-Lens Reflex and is used to describe any camera with a flip-up mirror inside the camera body. This mirror is used to redirect the light coming through the lens, up through a prism to the viewfinder, or eye cup that you hold up to your eye to compose a shot. When you click the shutter button the mirror flips up out of the way, the aperture closes to the setting you have chosen, the shutter opens to expose the sensor to light, and your picture is taken. Then the mirror returns to its starting position after the exposure is completed. All that happens in the blink of an eye.

Before DSLR cameras came to prominence around 2005, most cameras used film and were simply called SLR, or Single-Lens Reflex. Some people now prefer mirrorless cameras, which do not have a flip-up mirror inside. They can take photos, which are just as good as those from DSLRs. Either kind is great, and the important thing is to find one that suits your needs.

Depth of Field

In photography, depth of field (sometimes written as DOF or DoF) is the distance between the nearest and farthest objects in your scene that appear in focus. It is controlled by many factors including the aperture, lens focal length, distance to the subject, film or digital sensor size, and camera format.

When you have the subject in focus and something else in the foreground or background that's not in focus, that is a shallow depth of field. When everything in your picture is in focus you have a wide depth of field. You often see a shallow depth of field being used in portraits because it makes your subject really stand out from the rest of the picture. Shooting at wide

apertures can help you get a shallow depth of field, but be careful not to get too shallow or else it could ruin your picture (e.g. your subject's nose is in focus but their eye is not).



You can see a thin slice of ground and one single flower are in focus, while the rest of the image is blurry. This is what's known as a shallow depth of field.

Read more about depth of field here: [Understanding Depth of Field for Beginners.](#)

Dodging

Dodging is selectively making parts of a photo lighter. Like burning, the name comes from techniques used back in the days of film and darkrooms, but now it's usually done on a computer in a program like Photoshop or Lightroom.



Before dodging



After dodging. I wanted to lighten the lady's dark clothing without affecting any other portions of the image, so I used the Adjustment Brush in Lightroom to do this.

Dynamic Range

Dynamic Range is the difference between the brightest parts and the darkest parts of an image or a scene. In essence, it is the contrast range.

Human eyes have an incredible dynamic range in that we can see really bright and really dark things at the same time. If you stand in a room and look out a window on a sunny day the sky will be bright and blue but you will still be able to look around the room and see things just fine too.

Cameras can usually only see (and capture) really bright or really dark areas, but not both at the same time. Using the window analogy, either the things outside the window will be evenly lit and the room will appear dark, or the room will appear evenly lit while the scenery outside will show up as super bright. Modern digital cameras are still nowhere near as good as our eyes but have more dynamic range than their predecessors. They are much better at letting you expose for the bright things (i.e. make sure the sky is nice and blue) and then letting you use computer software to recover a lot of detail from the dark areas as well.



The original image, the foreground was quite dark compared to the bright sky.



The original image was quite dark, but my camera's sensor actually captured a lot more data than what was visible due to what's known as a high degree of dynamic range. Shooting in RAW allowed me to bring out much more of the shadow information in Lightroom.

Read more here: [How to Understand Dynamic Range in Photography.](#)

Exposure

Exposure is the total amount of light that hits the sensor for one frame or shot. It is determined by the exposure triangle settings (ISO, aperture and shutter speed).

Photographers will often talk about how a particular image is underexposed or overexposed, and nearly all photography involves getting a picture that is properly exposed. This refers to how bright or dark an image in general, and while some pictures have very bright parts and very dark parts all of this discussion falls under the umbrella of the term exposure. This is because when you press the shutter button on your camera you are literally exposing the image sensor (or film, in days gone by) to incoming light. How much light is captured depends on the size of the aperture in your lens, the length of time you leave the shutter open, and the ISO sensitivity of your camera's digital sensor.



A well-exposed image is neither too dark nor too bright, as is the case here. Sometimes photographers will intentionally underexpose an image (make it darker) or overexpose an image (make it lighter) for a specific artistic reason but for the most part, it's good to strive for a nice middle ground.

For more on exposure read: [Understand Exposure in Under 10 Minutes](#), or [Mastering the Exposure Triangle for Newbies](#).

Exposure Compensation

This is one way to quickly adjust the brightness of your image when shooting in a semi-automatic mode like Aperture Priority, Shutter Priority, or Program Auto. If you take a picture and see on the LCD screen (or the histogram) that it is too bright, you can use Exposure Compensation to adjust the exposure. Adjusting it to a negative value like -1 or -2 will make the next picture you take that much darker. The same principle can be used with positive values to make your subsequent images lighter.

NOTE: Make sure to turn the Exposure Compensation back to zero when you are done or all the rest of your pictures will be too dark or too bright! This setting does not automatically reset itself.

Read more on this topic here: [How to Use Exposure Compensation to Take Control of Your Exposure.](#)

F-Stop or F-Number

Basically, the f-stop or f-number is a measurement of how much light your lens is letting in through the aperture. It is defined by dividing the lens focal length by the diameter of the opening. Sounds like hard math but look at these examples:

Small opening

- Lens = 100mm
- Aperture diameter = 10mm (smaller, less light through)
- F-number therefore = $f/10$

Larger opening

- Lens = 100mm
- Aperture diameter = 50mm (bigger, more light through)
- F-number therefore = $f/2$

Imagine you cut a pizza into 10 slices. $1/2$ of the pizza is way more than $1/10$ th of a pizza, which would be just one slice. Inside your lens, it works the same way, and $f/2$ lets in way more light than $f/10$ – as seen in the example above.

A smaller f/stop number like $f/1.8$ means you are shooting with a very wide aperture and a lot more light is coming in, whereas a larger f-stop number (like $f/16$) indicates a small aperture and not much light is coming in. Lenses with small f-stop values are good in low light situations because they can let in more light and you can take pictures without the need to use a flash. A smaller f-stop value can also give you more bokeh, or background blur.



I took this shot in the early morning hours with very little available light, so I used an f-stop of f/1.8 in order to let in as much light as my lens would allow.

Fast Glass

Glass is a term that photographers use to describe lenses. Ones with large apertures are said to be fast lenses (many people do NOT know what this means). This just means that they have a large maximum aperture so consequently you are able to shoot with much faster shutter speeds than those with smaller apertures because they let in so much more light.

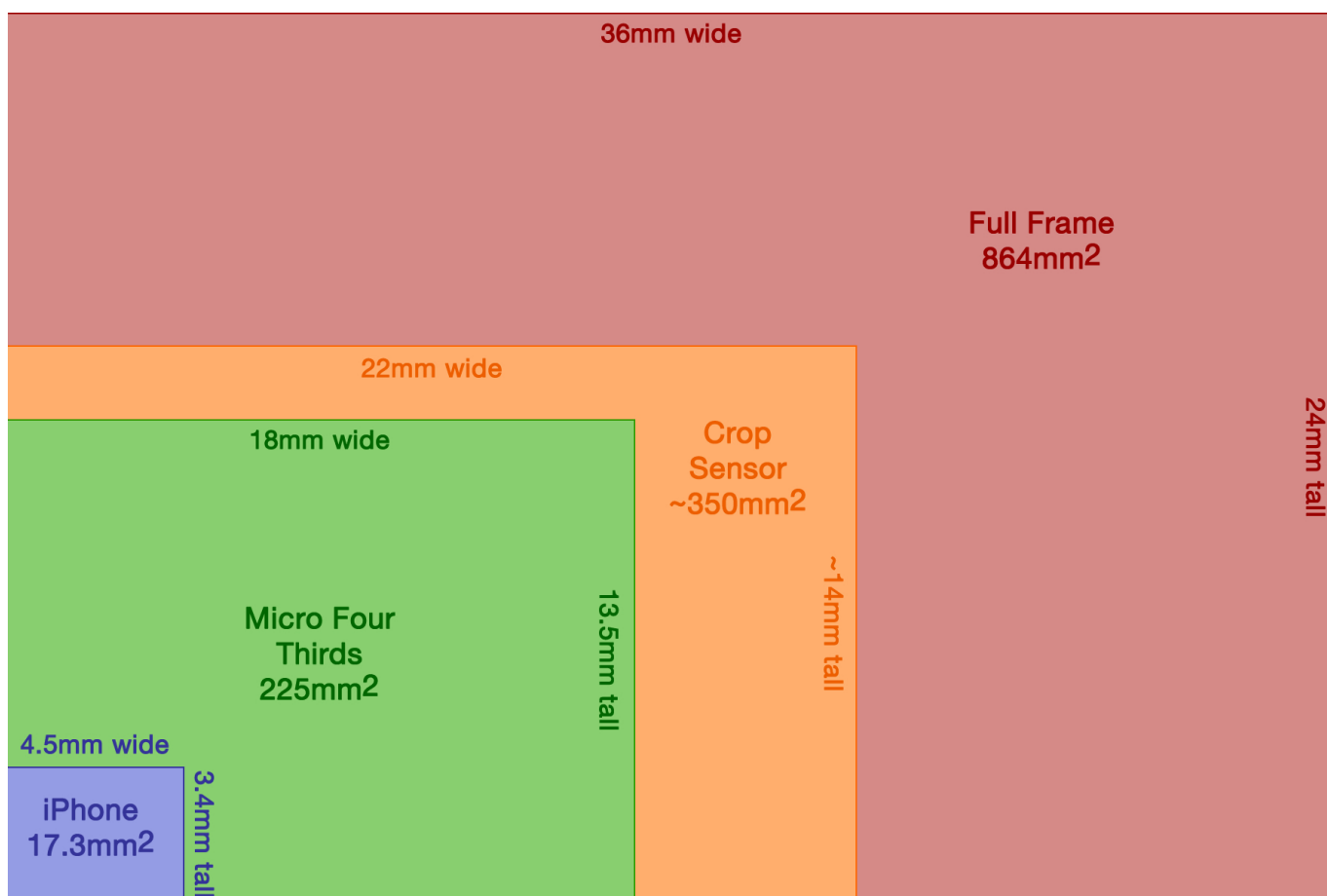
Fill Flash

This is when you use a flash, either the one that's built-in to your camera or an external speedlight, to help eliminate shadows on your subject. It's particularly useful if your subject is backlit, such as a situation where the sun is behind them. If you shoot in Auto mode and it won't let you turn on the flash, try putting your camera in Program mode, which should then let you control whether you want to use the flash.

For more on how to use fill-flash you could read: [How to Mix Ambient Light and Fill-Flash for Outdoor Portraits.](#)

Full-Frame

Unlike crop-sensor cameras, full-frame models have an image sensor that is the exact same size as a piece of 35mm film (36 x 24mm). They're more expensive, have better overall image quality especially at higher ISO values, and lenses designed for full-frame cameras are usually higher quality too. Comparing crop and full-frame cameras is kind of like a Toyota/Lexus situation. Both will get you where you need to go, but the latter does so with a little more flair and panache.





The Canon 5D Mark III is a full-frame camera, while the 60D has a crop sensor. Though the difference in sensor size does have some notable effects, both are great cameras capable of taking phenomenal photos. If you have a crop sensor camera don't let anyone tell you your gear is no good or needs to be upgraded.

You can read this for more on this topic: [How to Understand the Differences Between Full-Frame Versus Crop-Sensor Cameras.](#)

Histogram

This is the graph that you might see on the back of your camera or in your editing program on the computer. It shows you where all the data for your pictures is located on a spectrum of very bright (on the right) to very dark (on the left). If your histogram looks like a mountain your picture is properly exposed, but if it looks like a valley with mountains on either side then you have a lot of bright areas and a lot of dark areas. If your histogram goes off the chart on either side, then you have parts that are so bright or so dark that you may not be able to recover anything from those spots in Photoshop or another program (see Clipping above).

Read more about the histogram here: [How to Read and Use Histograms.](#)

Hyperfocal Distance

In the simplest terms, the hyperfocal distance is the focusing point at which your photo will have the most depth of field. The exact hyperfocal distance is dependent on several variables such as focal length of a lens, the aperture size or f-stop being used, and the distance between the subject and the camera. Apps and charts are available to help you calculate the hyperfocal distance if you want maximum depth of field and sharpness in your image.

Read more about this topic here: [How to Find and Use Hyperfocal Distance for Sharp Backgrounds.](#)

ISO

ISO refers to how sensitive your camera's image sensor is to light. Shoot at low ISO values like 100, 200, or 400 when you have plenty of available light. Shoot at high ISO values like 1600 or 3200 when you don't have a lot of light and want to avoid using the flash. Some people think that high ISO values result in images that are too noisy or grainy, but unless you make a lot of large-size prints go right ahead and bump up your ISO if it helps you get the picture.

NOTE: Technically speaking, increasing the ISO doesn't actually increase the sensitivity of your image sensor but instead increases the gain of your sensor. Discussing that is beyond the scope of this article. However, what really matters here is that when you're shooting at ISO 100 you need more light for a good exposure than when you're using a higher value like ISO 1600 or 3200.



This picture was taken with a basic Nikon DSLR at ISO 3200, and if you look super close you can see some fuzzy parts that are known as digital noise. If you have to make a trade-off between a blurry image taken at low ISO and a sharp image

JPG/JPEG

There are dozens of different image formats like PNG, TIFF, BMP, GIF, and lots of others each with its own advantages and drawbacks. Thankfully, virtually every camera manufacturer has adopted a single standard format called JPG that has been in use since 1991. Even though it has some drawbacks it's so widespread that it is basically the de facto standard for photos nowadays. JPG images don't take up too much space on your computer, are pretty decent in quality, and can even be edited in programs like Photoshop or right on your mobile phone.

On the downside, JPG files don't have as much data as larger formats like TIFF or PNG and it's not uncommon to see pixelation or fuzziness on sharp edges due to the algorithm used to decrease their file size. Use JPG if you want smaller files that are easy to share, but if you want the most flexibility in terms of editing it's better to go with a format like RAW.

For more on the JPG versus RAW debate read my article: [RAW Versus JPG – Why You Might Want to Shoot in RAW Format.](#)

Kelvin

White Balance is measured in degrees Kelvin, much like the temperature of the air is measured in Fahrenheit or Celsius. Bright sunlight is about 5000K (Kelvin) whereas artificial fluorescent light is about 2700K. If you know your lighting conditions you can set your White Balance accordingly, or you can use your camera's Auto White Balance to let your camera figure it out on its own.

Kit Lens

A kit lens is a basic zoom lens that comes standard with most DSLR cameras. These are a jack-of-all-trades lenses that are decent at many things but excel at nothing in particular. Lots of people like them and use them for years, but some people prefer more expensive lenses designed for particular purposes. If you have a kit lens and find yourself using the pop-up flash all the time, you might want a different option like a 35mm or 50mm prime lens. If you have a kit lens and it works fine for your type of shooting, then keep right on using it and don't let anyone tell you otherwise.

One reason kit lenses are cheaper is that they typically are made from plastic parts instead of metal, don't usually have weather sealing to protect against dust and rain, and have smaller maximum apertures due to the construction of the lens elements. Despite these limitations, they are great for beginners who want to start practicing with more advanced cameras and want a lens that covers a lot of the basics.



Behold, the 18-55mm kit lens. It zooms a little, has a fairly decent maximum aperture, and is not too expensive.



This was taken with a Canon Rebel XT1 with an 18-55mm kit at 18mm, shot at f/8.

Are you unhappy with your kit lens? Read these dPS articles: [4 Tips for Getting the Most Out of Your Kit Lens](#) or [Why your Kit Lens is Better than You Think](#).

Lens Flare

Simply put, lens flare is stray light that is hitting the front element of your lens. It shows up in some images as circular spots or streaks of light. Some people like lens flare, others find it distracting, but if done well it can create a softer, more organic feel to a picture. The more expensive lenses have special lens coatings to reduce lens flare. Many lenses also come with a lens hood that can be mounted on front to stop light from hitting the lens.

Read more on how to use lens flare creatively here: [How to Photograph Sun Flares: 14 Tips for Beginners](#)

Macro Photography

Macro simply means “big” and a macro lens can make small objects like bugs, insects, or flower petals look huge by letting you get very close to them. Technically speaking, true macro

allows you to reproduce objects at a 1:1 ratio on the image sensor. A coin 1cm in diameter would when taken with a macro lens, literally take up a 1cm circle on the camera's sensor. It would nearly fill the entire frame, and macro lenses accomplish this by allowing you to focus at very close distances compared to other lenses.

Macro lenses are expensive but produce amazing images, and if you want to dabble in macro photography without breaking the bank you can try out extension tubes, close-up filters, or even a clip-on lens attachment for your mobile phone.



Shooting macro-style images, whether with a true macro lens or with an accessory on your existing lens, can be a fascinating and enjoyable way to see the world around you from a whole new perspective.

Read more [macro articles on dPS here.](#)

Megapixels

Megapixels refers to the resolution of a digital sensor or the number of individual dots (or pixels, which means picture elements) that make up a digital picture. It is calculated by multiplying the number of pixels wide by the number of pixels high. E.g. for the Canon 1DX it is $5184 \times 3456 = 17.9$ million (or 18 effective megapixels).

Honestly, you can mostly just ignore this if you are looking at cameras. People used to think that more megapixels signified a better camera, but that is simply not the case anymore. A Canon 1DX is a \$6000 ultra-professional camera that only has 18 megapixels. The Sony A7S is a \$3000 camera that tops out at 12 megapixels. Mobile phones have anywhere between 6 and 12 megapixels, and most consumer cameras have anywhere from 16 to 24. Every camera made today has plenty of megapixels so don't give this a second thought. Just go get your camera and take pictures you like.

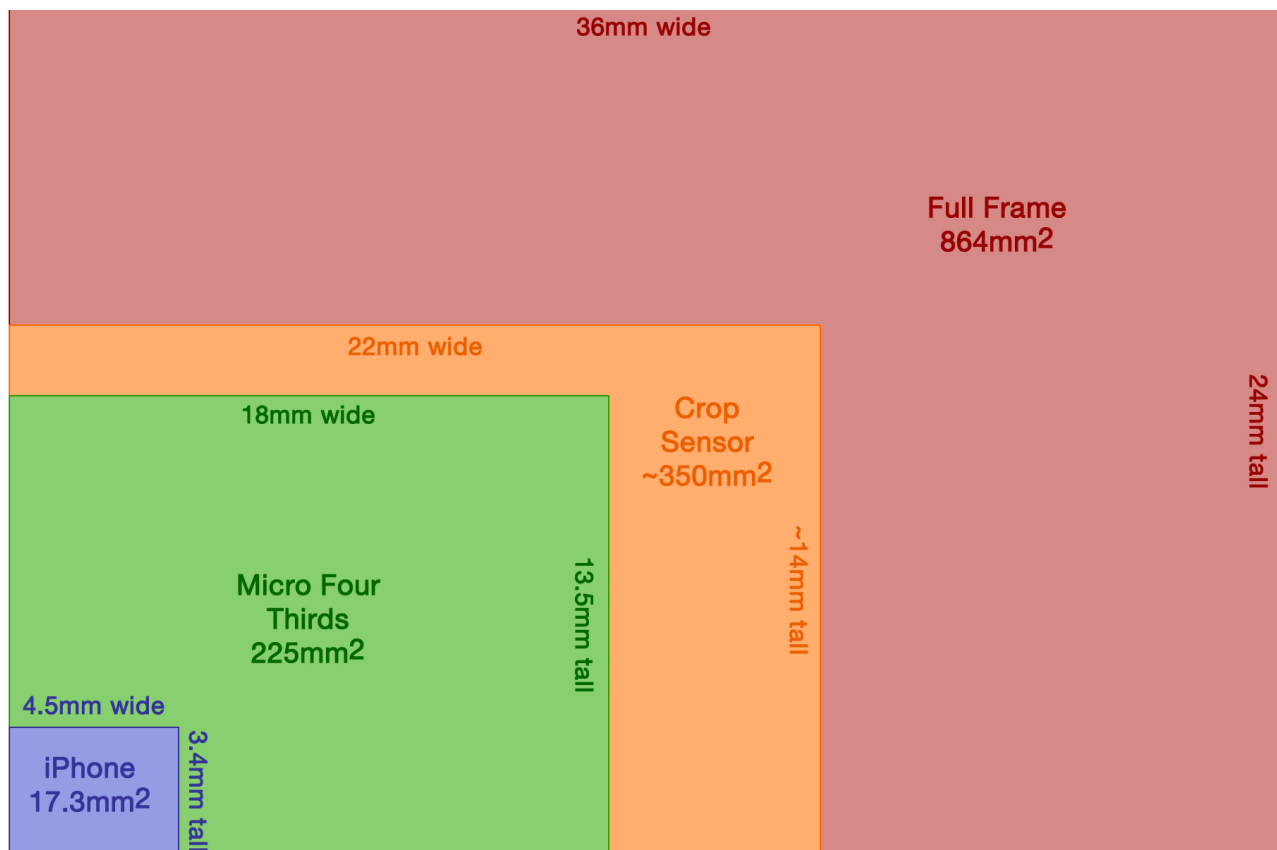


I took this with a 3-megapixel Canon Powershot SD110 pocket camera and have a framed 10-inch print of it hanging on my wall at home. No matter what camera you are shooting with, it almost certainly has enough megapixels for whatever you might want to use it.

Micro Four Thirds

Sometimes competition is good, but other times it can lead to infuriating situations. That is what we have currently with Canon, Nikon, Pentax, Sony, Fuji, and others where each company has its own set of standards for the kinds of lenses will work on their cameras. In 2008 Panasonic and Olympus worked together to create a new kind of camera that was mirrorless, had a small (but not too small) image sensor, and would accept any lens made by any manufacturer as long as it adhered to a few specific rules. This system is called Micro Four Thirds (MFT) because it refers to the small-ish image sensor and the ratio of its width to height.

While the name kind of makes sense it had the unfortunate side effect of sounding super confusing and nonsensical. Don't listen to haters on the internet. MFT cameras are small, light, and as good as any other camera in all the ways that really matter.



Camera sensors come in a variety of sizes, and as you can see a Micro Four Thirds sensor is not much smaller than the common crop sensor size found in most DSLRs. In practical everyday shooting, the differences don't really matter; the important thing is that you are using your camera and taking pictures you like.

Mirrorless Cameras

Inside every Canon and Nikon DSLR is a tiny mirror about the size of a postage stamp. It sits at a 45-degree angle and reflects light from the lens up through the prism, to the viewfinder so you can compose your photos. When you press the shutter button it flips up (making a little slap sound) so your camera can send light to sensor instead to make your image.

Fuji, Sony, Panasonic, Leica, Nikon, Canon, Pentax, Sigma, and Olympus all make mirrorless cameras, which do not have that mirror. They are usually a bit smaller but are pretty much equal to a DSLR in every other way. Some are called “Micro Four Thirds” which means their image sensor is a bit smaller, but they all take great pictures. If anyone tells you that a mirrorless camera is somehow less of a camera, politely nod and smile. Then continue going about your day making pictures you like while knowing that your friend is sadly misguided.

Read [more about Mirrorless cameras here.](#)

Neutral Density or ND filter

ND stands for Neutral Density and an ND filter one that has a dark tint to intentionally block out the incoming light, which makes it possible to get much longer exposures. If you’ve ever seen a picture of a river or waterfall where it looks like the water is silky smooth, it was taken with an ND filter so the photographer could leave the shutter open for several seconds even in broad daylight.

Nifty Fifty

For years, the 50mm lens was considered a fairly standard focal length because it wasn’t too long (telephoto) nor was it too wide. It is also small, lightweight, and fairly inexpensive. For that reason, these lenses earned the nickname Nifty Fifty, and they are still highly regarded for their all-around usefulness in a variety of photography scenarios.

Noise

If you take pictures at super high ISO values like 3200 or 6400 and zoom way in on your computer screen you will see some splotches and funny patterns on your images, kind of

like the static you might see on a super old TV screen when the cable was out – this is digital noise. It used to be a big problem with digital cameras but the technology has gotten so good nowadays that it's honestly not much of an issue anymore.



This picture was shot at ISO 6400, and when zoomed out it looks pretty good. If you zoom into 100% you can see some speckles, which is known as noise. It can be removed somewhat using Photoshop or Lightroom but often isn't that big of a deal.

Pixel Peeping

If you zoom in on a picture to 100% on the LCD screen of your camera, or with the magnifying glass tool in Lightroom (1:1 view) or Photoshop, you will sometimes see that your pictures are not as perfect as you thought. An eyelash might be blurry or a tree leaf might look fuzzy... oh the horror! This is pixel peeping, and if you find yourself doing it too often you just might be spending too much time worrying about the details and not enough time enjoying your photography.

Polarizing Filter

Polarizing filters are designed to block different wavelengths of light in order to add more color and contrast to a scene. Nature and landscape photographers often use these filters to get rich blue sky or deep greens from the flora, but they can also be used to eliminate or minimize reflections in water.

Prime of Fixed Focal Length Lens

Prime is another term for a lens that doesn't zoom in and out (it is also called fixed focal length).

Most zooms have smaller maximum apertures so they can't let in as much light as prime lenses, which offer large maximum apertures typically. So fixed lenses can shoot in low light situations without using the flash and will help you create more bokeh in the background if you like to shoot portraits. They are also typically smaller, lighter and sharper than zooms as well.

If you have been using a kit lens on your camera and want to try something new, get yourself a 35mm or 50mm prime lens and you will be amazed at what you can do with it. And if you miss having the zoom, just use the good old-fashioned method - your feet!



My favorite lens of all time doesn't even zoom in or out. These are called prime lenses and while they can't zoom, they have much wider maximum apertures, which can give you a lot of other creative ways to explore photography.



Look at all the bokeh in the background!

Read [more about prime lenses here on dPS](#).

Program Mode

No, the “P” on your camera mode dial does not stand for “Professional Mode”, although some pros do use it. It’s kind of a weird hybrid between Aperture Priority and Shutter Priority wherein your camera selects a few values of aperture, shutter, and ISO that it thinks would work well for a good exposure. Then you can override those by turning a knob or dial to adjust both the aperture and shutter at the same time, while still making sure the result is a well-exposed image.

It’s fun to play around with Program Mode, and if you pay attention to the f-stop and shutter numbers in your viewfinder it might help you learn more about what effects their changing values have on your images. Using Program Mode also gives you access to other custom functions like the ability to change white balance, the freedom to force your flash to fire or not, and the option of choosing various focusing modes.

Read my article: [Your Guide to Understanding Program Mode on Your Camera](#) for more on using this mode.

Raw Format

When you take a picture with any camera, whether point-and-shoot, DSLR, or even a mobile phone, the image sensor records all sorts of light and color data and then throws a ton of it away in order to create a small shareable JPG file. However if you want the ultimate in image quality, and desire total control over how your pictures look, you can shoot in RAW mode. This means no data is tossed aside and you can edit to your heart's content in Photoshop, Lightroom, or another program on your computer. RAW files are huge, will fill up your memory card quickly, and cannot be easily shared but many photographers prefer them because they allow for so much flexibility in editing.

Read more here: [RAW Versus JPG – Why You Might Want to Shoot in RAW Format.](#)

Rear-Curtain Sync

Light travels fast, really fast. Especially compared to your camera's shutter, which is usually open for a fraction of a second. So when working with flash, you have two options; to have the flash fire when the shutter opens (the default setting) or right before it is about to close. The latter is what's called rear-curtain sync. The difference is subtle but can have a profound impact on the resulting image.

Remote Triggers

A remote trigger (or a shutter release) is a simple device which either plugs into your camera or works remotely to trigger the picture being taken. The wireless kind sends a radio signal to your camera to take a picture, which is great if you don't want to be physically near your camera. Wildlife photographers, in conjunction with motion triggers, to fire the camera when animals pass a certain spot, often use remote triggers. These devices are a great way to minimize the shake that can often result from pressing the shutter button with your finger, even if you are using a rock-steady tripod. Finally, many professional photographers also use remote triggers to fire their external flashes or speedlights, so they can light their subjects from a variety of angles.

Sensor

The sensor is inside your camera body. It is a small flat microchip about the size of a postage stamp that does exactly what a piece of film used to do in old-school cameras. Its sole purpose is to collect light, specifically the light coming through the lens.

On mobile phones and pocket cameras, the sensor is very small, whereas on more expensive cameras with interchangeable lenses the sensor is much bigger. In general, smaller sensors aren't quite as good when shooting in low light situations, which is why you often end up using the flash when taking photos with a pocket camera or your mobile phone.

The benefits and drawbacks of sensor size also serve as fuel for all sorts of articles and comment sections online, but for the most part, the more expensive a camera is, the bigger its sensor. However, it should be noted that having a camera with a bigger sensor does not, in fact, automatically make you a better photographer.



That purple square in the middle of the camera is the image sensor, the microchip that senses incoming light. In the old days, you would have seen a piece of film there instead.

Shooting Wide Open

When you use the widest possible aperture of your lens, this is referred to as shooting wide open. You don't need a fancy portrait lens to do this, as every lens has a maximum and minimum aperture size.

Shutter

A very tiny door or curtain sitting inside your camera that opens and closes to let light in. On most cameras, it looks, and functions, exactly like the curtains you might see on a window in your home. Most cameras have a maximum shutter speed of 1/4000th of a second, which is super duper fast and can take tack-sharp images of a moving dancer, skateboarder, or water skier. The trade-off is you need a ton of light to use such a fast shutter speed, but if you are shooting in broad daylight you're good to go.

Shutter Priority

This is a shooting mode on many cameras that allows you to select a shutter speed and let your camera figure out other parameters like ISO (if you are using Auto ISO) and aperture. It's useful if you don't care about things like depth of field and just want to freeze a moment in time or create a sense of time passing. For the former, use a shutter speed of 1/500th or 1/1000th of a second, and for the latter, you would need a much longer speed like 10 or 20 seconds.

Put your camera in Shutter Priority mode (S on Nikon, and Tv or Time Value on Canon and others), turn a dial to get the speed you want, and let your camera figure out the rest.



If you want to set the shutter speed and let your camera worry about selecting the right aperture value to get a properly exposed photo, put it in S mode, (Tv if you use Canon).

Read this for more on using this shooting mode: [Aperture Priority and Shutter Priority: Exposure Lesson #1.](#)

SOOC

SOOC is an acronym for straight-out-of-camera. This is just a way of referring to pictures that have not been edited in any way by the photographer in Photoshop, Lightroom, or any other program.

Speedlight

It's an odd term but is a general catch-all that refers to any type of flash which can attach to your camera's hotshoe or be used off-camera. The flash built-in to most cameras is small and doesn't put out much light, but speedlights have enough power to brighten even the darkest room. The downside is they are expensive, heavy, and eat through batteries like crazy.

Sync Speed

The sync speed is the fastest shutter speed you can use when shooting with flash without having the light cut-off in your flash photos. Without getting into the complexities of how the camera shutter works and why this is (beyond the scope of this article), all you need to understand is that you need to shoot at the recommended sync speed for your camera (check your manual, most are 1/200th or 1/250th of a second) in order to avoid this issue. You can use a slower shutter speed, no problem, but a faster one will require more advanced settings and techniques.

Telephoto Lens

This refers to lenses with a longer focal length than “normal” which is 50mm on a full-frame sensor. There is some debate about which focal lengths constitute telephoto, but generally, 85mm is considered short telephoto, 125mm is medium, and anything over 200mm is simply known as telephoto.

TTL and E-TTL Flash Metering

Most cameras and flashes work by using a system called TTL metering, which stands for Through the Lens. (You might also see E-TTL which stands for Evaluative Through the Lens, and A-TTL which means Advanced.)

With TTL flash metering, the camera measures the amount of light coming in during the exposure and turns the flash off when it deems enough has been added for a correct exposure.

With A-TTL and E-TTL, the camera fires a pre-flash prior (they differ slightly as to when this occurs) to the exposure, which it then measures and uses to adjust the power of the flash accordingly to get the correct exposure. So if you are shooting in E-TTL mode on your flash and set your aperture to say f/5.6 - the pre-flash sends out a beam of light, the camera measures it and adjusts the flash higher or lower in order to correctly light the subject to achieve f/5.6.

Read more on this complex topic here: [Understanding Flash Metering Modes.](#)

Vignette

Vignette comes from the French word combination meaning “little vine”. This term used to refer to drawings of vines or leaves in the margins that separated different chapters of a book. Nowadays the common connotation refers to the dark areas that you sometimes find around the border of an image. Sometimes they are a physical aspect of how lenses bend and shape incoming light, especially when shooting at wide apertures on full-frame cameras, but often they can be added artificially using software like Lightroom, Apple Photos, or even just a simple Instagram filter.

If you want to use vignettes, my advice is to keep it subtle. Too much of anything, especially vignettes, can start to look tacky real quick.



Before edge vignette added.



A vignette was used to darken the edges and draw the viewer's attention to the two men having a conversation.

Weather Sealed

Some cameras are designed to take more abuse than others and while almost any you buy today can stand up to a fair share of everyday scratches and dings, high-end models like the Canon 1DX, Nikon D5, Fuji X-T1 and XT-2, or Pentax K-1 can withstand an onslaught of elemental forces. Dust, dirt, water, snow, extreme heat and cold, or even the hands of a toddler mean nothing to these imaging beasts due to the cornucopia of gaskets and seals they sport, not to mention special construction elements like magnesium-alloy or carbon-fiber-unicorn-horns.

NOTE: It is important to note that weather sealing is not at all the same as waterproofing. Olympus and others make waterproof cameras specifically designed to shoot underwater. Try that with your weather-sealed Canon 5D Mark IV and you'll end up with a very expensive paperweight.

White Balance

Simply put, White Balance means adjusting the color hue of your photos so that all the subject and scene look neutral or true to their natural tones. Different light sources emit a different color (temperature or color of light) so your camera has a setting to be able to adjust to your surroundings; this is called the White Balance.

Most cameras include handy presets (including Auto or AWB), often accompanied by visual indicators that help you set the White Balance for a variety of shooting situations. Common settings are daylight, cloudy, shade, fluorescent, flash, and tungsten or incandescent. Or you can just shoot in RAW format, which allows you to set whatever white balance you want later on in your computer using a program like Lightroom or Photoshop.



Notice how the same scene, shot with different White Balance values, can take on an entirely different feel as the color hue changes. For an indoor scene like this, a value of about 2500 or 3000 would be appropriate, whereas a higher value of 4500 makes the whites seem yellow and muddy.

Wide-Angle Lens

This refers to lenses with a shorter focal length than “normal” or 50mm on a full-frame sensor. Wide-angle lenses are loved by nature and landscape photographers because they can capture stunning vistas and wide open spaces. Ultra wide-angle lenses (wider than 24mm on full-frame) are ones that are super-wide, but not quite a fish-eye (wider than 15mm).

Conclusion

Hopefully, these definitions have helped you understand a bit more about your camera and the photographic process, and maybe even give you some new things to try out.

If this list has left you feeling a bit overwhelmed with new information, I recommend choosing just one unfamiliar term and learn that before moving on to others. Have your camera ready so that as you experiment with things like shutter speed, white balance, and depth of field you can see the results for yourself and watch what happens when you change some of the variables and take more pictures.

However, even though it's important to know this information it's equally vital that you spend time getting out in the world and just experimenting with your camera. Don't worry or get stressed out if you can't remember exactly what depth of field means or don't know your camera's flash sync speed.

If you're looking for ways to increase your photographic skills the best thing you can do is grab your camera and take photos!

About the Author

[Simon Ringsmuth](#) is an educational technology specialist at Oklahoma State University and enjoys sharing his enthusiasm for photography on his website and podcast at [Weekly Fifty](#). He and his brother host a monthly podcast called [Camera Dads](#) where they discuss photography and fatherhood, and Simon also posts regularly to Instagram where you can follow him as [sringsmuth](#).

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