



TWOPEASINABUCKET.COM PHOTOGRAPHY COURSE: 12 WEEKS TO BETTER PHOTOS

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LESSON ONE: Aperture basic training

One of the most necessary but oftentimes least understood parts of photography is **Aperture**. The size of the aperture, or **f/stop**, of a lens determines how much of your photograph is in focus. Generally, when you hear someone talk about f/stop, they are referring to aperture -- *the terms are often used interchangeably*. The f/stop on a lens can go from 1.2 to 22 or sometimes higher. (It's not really important to this class for you to understand the mathematical basis for these numbers, but instead to understand what they mean to your photography.)

F/stops can be confusing at first. The f/stop numbers refer to how open or closed the aperture on the lens is. The wider the opening of the lens, the greater the amount of light that enters your camera at one time – which means that when your aperture is wide open your focus will be shallower and fewer things in your photo will be in focus.



Here is a photo of an open aperture on a 50mm lens.

The **WIDER** the aperture, the more light that comes through the camera -- because a lot of light is flowing through the aperture opening **LESS** of your photo will be in focus.

A low f/stop, such as f/1.4 or f/2.8, is considered a wide-open aperture.

(photo courtesy istockphoto.com)

Here is a photo of a closed aperture on a 50mm lens.

The **SMALLER** the aperture, the less light allowed -- because there is very little light flowing through the aperture **MORE** of your photo will be in focus.

A high f/stop, such as f/22, is considered a closed aperture.

(photo courtesy istockphoto.com)



The smaller the opening on the lens, the smaller the amount of light that is allowed to enter your camera at one time – which means your focus is deeper and more of your photo will be in focus.

The confusion for most people arrives when you try and put the f/stop number with these scenarios. In terms of aperture openings, f/1.4 would be a wide-open aperture on most high-end lenses, whereas f/22 would be a virtually closed aperture.

*Basically, when you use a low f/stop, less of your photo will be in focus. When you use a higher f/stop, **MORE** of your photo will be in focus.*

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This week, we're encouraging you to check out the "Aperture Priority" mode on your camera (check your manual if you're not sure if you have this mode.) Aperture Priority is usually represented with an Av or A symbol on your camera dial. When you are using the aperture priority mode, you are responsible for setting your own aperture while letting the camera set the shutter speed.

Coming next week:

In ideal lighting conditions, it's easy to play around with your aperture settings to create a variety of different images based on how much of your photo is in focus. Problems can arise, however, when you find yourself in a low-light situation and have to use a low aperture for a photo where you want the majority of your subject(s) to be in focus. This is where shutter speed and film speed (ISO) come into play with aperture, and we'll address this relationship in next week's lesson on advanced aperture.

WEEKLY CHALLENGE: Exploring Aperture

So here's the question we want to focus on this week:
Just how much of your photo do you want to be in focus?

The answer, of course, varies according to the situation. But in order to become more comfortable choosing your aperture, we invite you to partake in our weekly challenge:

First of all, we want you to **operate your camera in Aperture Priority mode** (often indicated with an "A" or an "Av" on your camera dial. (Don't worry about shutter speed as the camera will take care of that for you.) The goal of this challenge is to discover what different f/stop settings on your camera will produce for you and to become more comfortable with selecting these settings to fit your subject.

The easiest way to do this is to **find a fixed subject** such as a flower, a tree limb, or in our case, a birdbath. (If you are outside in daylight, set your ISO to around 400. We highly recommend you try this first challenge outdoors, if it's not too cold for you! If you are inside, you may have to set the ISO on your camera much higher like 1250 or even 1600. Your photos will be grainy, but you should still be able to tell what your aperture setting is doing to your photos.)

1. Set your f/stop (often accomplished by turning a dial, but check your manual if you're not sure) to the lowest setting it will go. Compose your image and use either the manual focus or autofocus to focus on one particular spot of your subject (the subject of our photos was the frontmost rim of the birdbath, and we made sure to focus on this for all 3 photos). Take your picture.
2. Move your aperture setting to something around f/8. Compose and refocus on the same element again. Take your picture.
3. Move your aperture setting to the highest setting it will go to (most likely f/22). Compose and focus on the same element again. Take your picture.

Now bring these pictures into your image editing program and look at the differences in the composition.



1. On the first image, you will have very little outside the initial focus point in focus.

The front of the birdbath is visible here, but the background is completely blurry.

2. On the second image, you will have more of your subject in focus, but still will maintain a pleasing background blur that separates your subject from the background elements.

The front & inside of the birdbath are in focus and the background, though visible, is not in sharp focus.



3. On your final image, you will most likely have virtually everything in front and behind your subject in focus.

Pretty much everything is in focus -- even the ugly satellite dish & lamp post on the right-hand side of the trees.

This is how aperture works: the lower the f/stop, the less that is in focus. The higher the f/stop, the more that is in focus.



Q & A: Aperture

First of all, we wanted to thank you for submitting your questions on the thread that we posted on photography board! We were so excited to see so many questions (and hope to respond to a great deal of them throughout the class, either directly, in this section, or through the topics & content we've chosen to discuss based on your suggestions.)

Q: Southern Art said: I would like to learn more about aperture, shutter speed, exposure...and when to use what settings.

A: This is definitely the request we received most frequently, which is why we've chosen to start the course by discussing Aperture, followed next week by Aperture, ISO & Shutter Speed.

Q: Snowball2 said: The only comment I have is not to forget those of us who are using a point-and-shoot. (A digital slr is on my wishlist, but I haven't got it yet!) I'd love to learn more about composition and using natural light. And getting the most out of my camera, such as it is.

A: We absolutely want to include everyone! After we tackle aperture, shutter speed, and ISO, we're going to discuss Light, Composition, lenses, and taking photos in a variety of settings. We just ask for your patience while we cover the basics for those who do have bridge, digital, or film SLRs. (Although, if a digital slr is on your wishlist, it can't hurt to do a little prereading!)

Q: ****cindyupnorth**** asked, "Is this only for digital??! Hope not!!"

A: No, it's not! However, we do want everyone to understand that this is a beginning photography course, and not a beginning Photoshop class. (We do think, though, that Photoshop for Photographers would be a great class to follow this one!)

Q: Chris in Ontario commented: I have a Canon Rebel xti and have never taken a photo without it being on automatic. I really need to start over and learn the basics so I can take manual photos.

A: We know that shooting in manual can be intimidating, and we also know that there are a lot of you out there who just received new digital SLRs for Christmas. So we're encouraging you to take a small step first -- instead of jumping into full manual mode we'd like you to try out one of the creative modes, Aperture Priority, first. This mode allows you to make one big choice (your aperture) while relying on the camera to make the other choice (shutter speed) for you.

Q: Thayerzoo asked: What is the correct Aperture or focal point (closest person, furthest or person in the middle) for multiple subject photos so everyone is in focus?

A: The short answer is: We recommend using around an f/8 (depending on the size of the group) and focusing on the subjects on the outside of the group. We'll discuss group shots in depth in Week 9: Portraits.

Q: Meglabs asked: What do S, L, and R stand for? (*I'm really a beginner*)

A: It's great to be a beginner, and we're glad you're interested in learning more! SLR stands for Single Lens Reflex, and it refers to a type of camera. For more information on camera types, terms, and a bevy of other topics, check out the existing photography articles in the Photography Education section at 2peas. (From the menu bar at the top of the homepage, simply select "photography articles" from the drop-down menu under "Photography" at the far right-hand side of the page.)