



DEPTH OF FIELD

Depth of Field refers to what is in focus in the photograph. Sometimes we will intentionally make the background fuzzy, so our attention is centered on the object of interest in the foreground. This is called a *shallow depth of field*.

In other cases we want the whole photograph, foreground and background, to be in sharp focus. This is referred to as an *extended depth of field*.

Luckily there are a few things we can do to make our cameras behave to achieve these effects.

A shallow depth of field has the background out of focus while the main subject is in focus

There are three things that control the depth of field; aperture, focal length and distance from the subject.

To take a shot with the background out of focus you need to use a wide aperture. This translates into a small number on the aperture scale, so to open up your camera to its widest aperture you can. This will be at f3.2 or even 2.8 or 1.2. Different lenses will have a maximum and minimum aperture allowance. Open it to the widest it will go.

Focal length (zoom settings) will have a big effect on the shots as well. Using your zoom settings or a telephoto lens will allow the background to blur.

Another factor is the distance from the subject to the camera, and the subject to the background....the closer to the subject the shallower the depth of field. Move closer to the subject to make the background out of focus and make sure that the subject you want to be in focus has distance from the background you want out of focus. Experiment!

If you set your camera to pick the shutter speed (AV on a Canon or A on a Nikon) the camera will select the shutter speed...sometimes. I have found it better to set the camera on manual and set both the aperture and the shutter speed manually, and make quite a few test shots before I settle on one of them. The problem with fiddling with these settings is to get the right amount of light into the camera, and if you are using a very wide aperture the corresponding shutter speed must be somewhat fast. I would start at 1/100 sec. and work my way down until it appeared that the photograph was somewhat respectable in the LCD screen.

Extended Depth of Field has everything in focus.

This trick has to have the camera aperture set at a small opening, or a high number, say f22 or higher. If you are trying this out you will need to put your camera on a tripod. Depending on the light you have to work with, you will need to shoot at 0.5 second or less...sometimes the shutter speeds will be very slow 1 second or more. You will have to experiment to make sure that everything is coming out the way you want it to, as it is so very easy to look at the LCD screen and not notice if the background is in focus. Occasionally it is worth the trouble to shoot directly into a laptop computer to check for these details....and it is easier than running back and forth with the SD card to your desktop or laptop computer checking the shots. If this is not possible take many shots of your subject trying different apertures and shutter speeds. You can check the EXIF information by right clicking the photo icon or thumbnail and selecting "Properties" and then "Details". The form will tell what your aperture and shutter speed were, as well as other details such as the focal length and ISO settings.

Of course you can always use the old fashioned method of recording your shots, by writing down your camera settings, but EXIF information is recorded with every shot you take and is mighty handy if you need to know what the camera settings were.

If you research this topic online you are likely to find some articles that give you algebraic formulas and charts that are totally confusing. However I did find quite a few nice articles online and videos online that were very helpful. One of the best was from a camera store in Manhattan, Adorama. Here is the link to the video <http://www.adorama.com/alc/0012518/article/Depth-of-Field-AdoramaTV>. There are many others that will be quite interesting if you do a Google search on "Depth of Field".

BLURRY BACKGROUND



IN FOCUS BACKGROUND



These two images were taken with my Canon EOS Rebel XS. Normally I would tweak the brightness in photo editing, but I left them as shot for this article. The EXIF information is below.

The shot above was taken with my 18—55 mm lens, mounted on a tripod. It was set at 55mm and the aperture was **f5.6** and the shutter speed was **1/40 sec**. The camera was about 48 inches from the flowers, and the background was about 20 inches from the back of the flowers. ISO was 400 and white balance was on auto.

The shot above was taken with my 18—55 mm lens, mounted on a tripod. It was set at 55mm and the aperture was **f36** and the shutter speed was **1sec**. The camera was about 48 inches from the flowers, and the background was about 20 inches from the back of the flowers. ISO was 400 and white balance was on auto.

