

2018-19 Welcome group – Follow-on challenges

Session Two: Aperture and depth of field

Using aperture and depth of field creatively means requires you to understand your own camera and lenses, more so than with shutter speed. You need to know how your camera works in order to get the effect you want. As Peter explained depth of field varies according to lenses and sensor size.

Some general guidelines on aperture

- If you want to get a shallow depth of field where an object stands out from its background then use a large aperture (small f numbers f2.8 – f8)
- If you want to see the big picture (eg landscape) then use a small aperture and high f numbers f16 upwards)
- If your shot is somewhere in the middle and you're don't want either of these extremes then use the middle ground – medium aperture and f number – f11-f16

Guidelines on lens:

- A wide-angle lens with a short focal length (eg 18-50mm), will generally give you a greater depth of field (big picture shots)
- A telephoto lens (eg 70mm upwards) will generally give you a shallower depth of field (ie close-up of the rosebud)

Rather than try to remember these guidelines, the best thing is to do some experiments with your own equipment so you understand how it works best. You may want to take some example shots, print them out and write on the lens, the aperture settings etc and keep them as your cheat sheet for future reference.

Here are some 'challenges' to encourage you to go out and practise.

Experiment with focal length.

This is an exercise to understand the perspective of your lens that Peter talked about. Go out into your garden or a local park and pick a subject with plenty of space around it. Set your camera at its widest angle (ie a short focal length eg 18 mm or 24 mm.) On a DSLR the length settings are seen on the lens ring. On a compact camera you may see the settings in the viewfinder.

Take a shot of the subject with plenty of outer detail and then walk 5 paces forward and take another shot. Walk progressively towards the subject taking photos at regular instances without changing the focal length, until you can no longer focus on the subject.

Then go back to where you started and repeat the exercise with incremental extensions to the focal length (eg 35mm, 50 mm however long your lens). If you have more than one camera, try it with a different camera. If you have more than one lens then try it with each one.

What this will tell you is the difference in perspective between lenses. A wide-angle lens gives you a lot of the surroundings about your subject. As you increase the focal length then you will see progressively less surroundings and your subject becomes more dominant. There are times when you want to photograph a big scene and other times you want to focus in on the subject.

Experiment with depth of field

Pick a subject that stands out against its surroundings. A flower is a great example, but it could be some berries or conkers, or a vase against the curtains if you're indoors. Get reasonably close (say 12-18 inches) and photograph it at the largest aperture (lowest f-number, typically f5.6 or lower). Double that number and photograph it again. Double that number and photograph it again. So f5.6 - f11 -f22.

You should see a significant difference in the amount of detail in the background. At f22 you should see the item with all the detail around it. At f5.6 the object should stand out from the background.

If you have more than camera, then repeat the same experiment. If you have a Macro setting on your camera then try that as well. Compare the results. What's the most interesting?

Front and back focusing

In this exercise, choose a situation where you have a couple of objects, one in front of each other. It could be a couple of different objects, it could be a bush with leaves and branches.

This is useful if you want to photograph an object through something else, eg through a screen, or through grasses.

Set the camera with a large aperture (small f-number) and take a shot with the foreground in focus and the background blurred. Then alter the focusing so you get the background in focus and the foreground blurred. If your camera has multiple focus points, you may be able to change the setting. You may need to use manual focus. You may need to use focus lock – where you focus, half close the shutter and then reframe the shot.

Using soft focus

Often when we talk about shallow depth of field we're talking about having one object very clear and blurring everything else. But it can be very effective to have some objects in the background which are still recognisable although not in sharp focus.

So here choose a situation where you have a number of objects that are in close proximity eg an outdoor café scene with tables and chairs and people. Experiment with varying levels of shallow depth of field. Can you get the hand around the coffee mug in focus but the rest out of focus? Can you get the coat buttons in focus, but the coffee mug is out of focus? Can you get the coffee mug in focus and the people on the next table in soft focus? This is an interesting way of using the wider to add context but not compete with the essential subject.

Pick out some of your best results and share them on our [Extra events Flickr page](#).

Enjoy!