

## Coffee & Camera Aperture Homework

### Exercise 1 – Adjusting Aperture When in Manual Mode

1. Purpose: This exercise will demonstrate what happens when you (1) change your aperture and (2) leave all of the other settings alone.
2. Choose an outdoor scene with some depth.
  - a. This exercise is one time where taking a photo at the brightest time of the day (11:00-1:00) is recommended.
  - b. Try to find a scene that has some interest close to where you are taking the photos from (in the foreground), 1/3 of the way into the scene (the middle ground), and in the background.
  - c. Focus on an object (e.g., tree, statue, bench, sign).
  - d. Do not choose a subject that moves (e.g., person, pet) because you want the scene to remain the same throughout the exercise.
3. Using the Mode Dial, put your camera in Manual mode.
4. Set the **Auto ISO Sensitivity** Control to off.
5. Set your **ISO**
  - a. If it's cloudy, set ISO to 400.
  - b. If it's bright, set ISO to 100.
  - c. If it's in between, set ISO to 200.
  - d. If you're shooting after sunset or before sunrise you will need to use a higher ISO.
6. Set your **aperture** to f/8.
7. Focus on something that is about 1/3 of the way into the scene.
8. Using the exposure indicator in your viewfinder, adjust the **shutter speed** until you have a good exposure.
  - a. You may need to consult your manual to know how the exposure indicator expresses a good exposure.
  - b. The exposure indicator may be shown on the display on the back of your camera in addition to (or instead of) in the viewfinder.
9. Using the f stop scale **adjust the aperture only** and take a series of seven photographs at f/2.8, f/4, 4/5.6, f/8, 4/11, f/16, f/22.
  - a. If the maximum aperture of your lens does not allow you to use wider apertures (e.g., f/2.8) just go to the widest aperture you can.
  - b. DO NOT change shutter speed or ISO or focal length (if you're using a zoom lens). The purpose of this exercise is to show what happens when the aperture is the only setting that you are changing
  - c. **Note: Your camera may have intermediate stops in between the ones above, but you don't need to use them for this exercise.**
10. By Sunday, November 18 5:00pm, please send me your images at the largest aperture, the smallest aperture, and at f/8.

### Exercise 2 – Adjusting Aperture When in Aperture Priority Mode

1. Purpose: This exercise will demonstrate what happens when you (1) change your aperture and (2) let the camera change the shutter speed
2. Choose an outdoor scene with some depth.
  - a. You can use the same scene you used in the first exercise or choose a new one following the guidance above
3. Using the Mode Dial, put your camera in Aperture Priority mode.
4. Set the **Auto ISO Sensitivity** Control to off.
5. Set your **ISO**
  - a. If it's cloudy, set ISO to 400.
  - b. If it's bright, set ISO to 100.
  - c. If it's in between, set ISO to 200.
  - d. If you're shooting after sunset or before sunrise you will need to use a higher ISO.
6. Set your **aperture** to f/8.
  - a. Your shutter speed will be set automatically.
7. Focus on something that is about 1/3 of the way into the scene.

- a. Your camera will automatically adjust the shutter speed based on the ISO and Aperture settings you've made.
8. **Adjust the aperture only** and take a series of seven photographs at f/2.8, f/4, 4/5.6, f/8, f/11, f/16, f/22.
  - a. If the maximum aperture of your lens does not allow you to use wider apertures (e.g., f/2.8) just go to the widest aperture (smallest f number) you can.
  - b. DO NOT change ISO or focal length (if you're using a zoom lens). The purpose of this exercise is to show what happens when the aperture is the only setting that you are changing
  - c. **Note: Your camera may have intermediate stops in between the ones above, but you don't need to use them for this exercise. Typically, aperture can be adjusted in 1/3 stop increments.**
9. By Sunday, November 18 5:00pm, please send me your images at the largest aperture, the smallest aperture, and at f/8.

### Exercise 3 – Time Lapse Photography, Sort Of...

1. Purpose: This exercise will demonstrate what happens when you (1) don't change the aperture and (2) let your camera adjust the shutter speed based on the amount of light in a scene.
2. Set your camera on a tripod or other stable platform pointing out of a south or north facing window.
  - a. Note: Do not choose a window where it may appear that you are photographing your neighbors or other people without their knowledge
3. Using the Mode Dial, put your camera in **Aperture Priority** mode.
4. Set the **Auto ISO Sensitivity** Control to off.
5. Set your **ISO** to 400
6. Set your **aperture** to f/8.
7. Focus on something that is about 1/3 of the way into the scene.
8. On a single day, take a series of photos one hour apart.
  - a. Do not move your camera at all.
  - b. Take as many photos as you can, but take at least six and make sure that they occur over a period of time where your camera is coping with significant changes in the amount of light in the scene. For example, start at 2:00pm and finish at 8:00pm.
9. Do not adjust any other settings.
  - a. Allow the camera to adjust shutter speed, but leave ISO and aperture alone.
10. By Sunday, November 18 5:00pm, please send me the beginning of the series, the end of the series, and the middle.

### Exercise 4 – Your Photo Story

1. Continue to experiment with the techniques you're learning.
2. For this week, add to your story using depth of field to emphasize the subject of some of your photos.
  - a. Use Aperture Priority and a wide aperture to create background blurriness.
3. By Sunday, November 18 5:00pm, please send two new photos for your story.