Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour \_\_\_\_\_\_\_\_

**Battle of the Apertures: Large vs. Small**

LT: Use aperture to control exposure and depth of field.

SC: Create a set of photos that show the effects of a large or small aperture.

**Understanding Aperture**

Aperture refers to the opening of a lens's diaphragm through which light passes. It is calibrated in f/stops and is generally written as numbers such as 1.4, 2, 2.8, 4, 5.6, 8, 11 and 16. The lower f/stops give more exposure because they represent the larger apertures, while the higher f/stops give less exposure because they represent smaller apertures.

**How Aperture Affects Depth of Field**

Depth of field is defined as "the zone of acceptable sharpness in front of and behind the subject on which the lens is focused." Simply put: how sharp or blurry is the area behind your subject.

Here's the equation:

The lower the f/stop—the larger the opening in the lens—the less depth of field—the blurrier the background.

The higher the f/stop—the smaller the opening in the lens—the greater the depth of field—the sharper the background.

**How Aperture Affects Shutter Speed**

The f/stop also affects shutter speed. Using a low f/stop means more light is entering the lens and therefore the shutter doesn't need to stay open as long to make a correct exposure which translates into a faster shutter speed. Again, the reverse is true: using a high f/stop means that less light is entering the lens and therefore the shutter will need to stay open a little longer which translates into a slower shutter speed.

(Source: https://www.nikonusa.com/en/learn-and-explore/a/tips-and-techniques/understanding-maximum-aperture.html)

1. What is aperture?
2. How is it measured (calibrated)?
3. How do you set it on your camera?
4. What happens to the exposure when you use a higher f/stop, like f/16?
5. What happens to the depth of field when you use a higher f/stop, like f/16?
6. What happens to the exposure when you use a lower f/stop, like f/4?
7. What happens to the depth of field when you use a lower f/stop, like f/4?
8. Take the same photograph scene at two different apertures, like f/16 and f/4, and share the set of photos in class.

**First:** Set your camera to aperture priority mode (probably AV or A) or to manual mode so you can control the aperture.

**Second:**

Find a well-lit subject and photograph it at high and low aperture settings, like f/16 and f/4.

**Third:**

Crop your photos to 5x7 and name them like this:

LastName FirstName Battle of the Apertures – f#

Simpson Homer Battle of the Apertures – f2point8

Simpson Homer Battle of the Apertures – f11

Make copies for yourself and transfer the originals to the class folder.

**Fourth:**

Be prepared to talk about your photos when we present them in class.