

Digital Photography Assignment



Table of Contents

Know Your Camera

Image Composition

- Creative/Unique Angle

Shutter Speed

- Slow/Fast

White Balance

- Correct/Incorrect

Aperture Settings

- Correctly Exposed, Under-Exposed, Over-Exposed

Depth of Field

ISO (“Film” speed)

Lighting

- Natural Lighting, Flash, 3-Point Portrait Lighting

Nikon Vs. Canon camera comparison

Know Your Camera

As with any piece of electronic equipment, you want to take the time to learn how to operate your camera correctly.

For your first shots, limit the settings you change so that you can get started quickly.

On most digital cameras, you adjust settings using a menu that is displayed in the camera's LCD panel.

The settings are within menus much like computer software. Your camera will also have a control on it - usually on the back or top - that functions like a four-sided computer mouse so you can select different settings.

Know the basic controls on your camera.



Basic controls on Nikon camera

Composition

Your initial impulse may be to use the camera's LCD monitor instead of the viewfinder to compose pictures. You can do this, but this technique can also result in "soft" focus images; holding a lightweight camera away from your body is an invitation for motion blur.

Holding the viewfinder to your eye provides built-in stabilization that helps ensure sharp images. To stabilize the camera, hold it with one hand, and support it with the other. Keep your elbows close at your side. Stand with your feet shoulder-width apart to steady the camera.

Get close to your subject when possible. This eliminates potentially distracting background details and focuses attention on your subject.

Pay attention to the background! Use the Rule of Thirds! Avoid placing objects dead centre – this helps to create visual interest.

Try to take shots from interesting angles. Force people to see things in unique ways.

Unique Angles:



Unique Angle #1 (taken from below)



Unique Angle #2 (taken from above)

Shutter Speed

Shutter speed refers to the amount of time the camera's shutter is open. Longer shutter speeds will cause moving subjects to appear blurred. Freezing quick moving subjects require fast shutter speeds. Shutter speed also needs to be adjusted depending on the type of subject being photographed. Shutter speeds slower than 1/120 of a second require a tripod to eliminate camera shake.

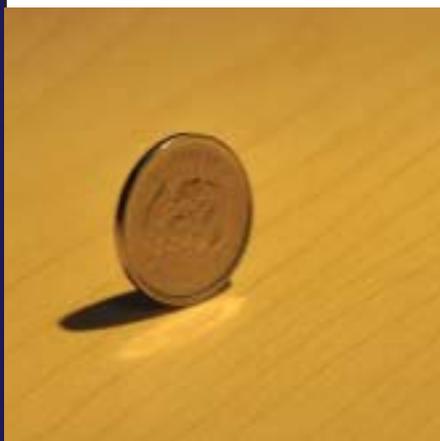
Task:

- Select a well lit moving subject.
- Select a slow shutter speed (approx. 1/8) and take a picture.
- Adjust the shutter to approx. 1/30 and take a picture.
- Adjust the shutter to approx. 1/500 or faster and take a picture
- Repeat the series with another subject.

Note:

Fast shutter speeds may result in underexposed (dark) pictures. You can compensate for this by adding light to the subject using the hot shoe flash. An alternative method would be to increase the camera's ISO speed.

Examples:



Fast Shutter Speed



Slow Shutter Speed



Slower Shutter Speed

White Balance

White balance is a camera feature that compensates for colour cast in the pictures caused by the colour temperature of the lighting you are working with. Natural, incandescent, and fluorescent lights all have their own colour which will effect how white appears in your photos. The camera has an automatic white balance setting but it also allows you to select different settings based on the lighting that you are using. White balance adjusts colors based on the light you are shooting (indoor vs. outdoor). With proper white balancing, white objects in your photos appear as white instead of with an orange or blue cast.

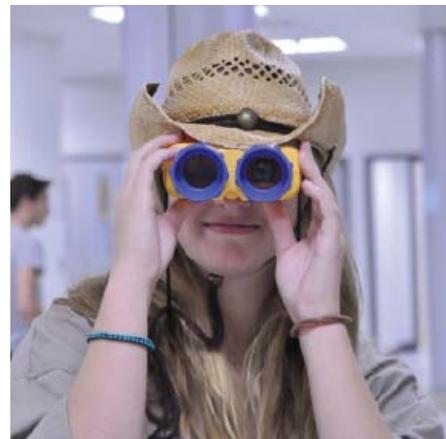
Task:

- If the weather is nice select an outdoor subject that contains white areas.
- Use the camera's controls to adjust the white balance to natural light. Take a picture.
- Readjust the white balance to Fluorescent and repeat the picture.
- Readjust the white balance to Incandescent and repeat the picture.
- Select and indoor subject and repeat the process taking three more pictures indoors.

Examples:



Incorrect White Balance



Correct White Balance

Aperature

Refers to the size of the hole the lens uses to allow light into the camera. Aperture is measured in F-stops with an F-stop of 3.5 being a large aperture and an F-stop of 22 being a small aperture. Large apertures will allow light into the camera quickly but they create a picture with short depth of field. This means that only a small range of the picture, the subject, will be in focus. Conversely, a small aperture allows less light into the camera causing longer exposure times but the pictures will have large depth of field. This means the foreground, background, and subject will be in focus. Under-exposed = not enough light (appears too dark). Over-exposed = too much light (appears washed out)

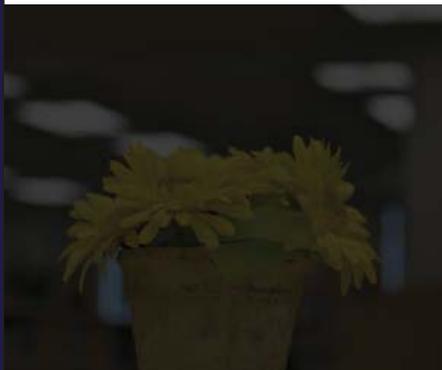
Task:

- Select a well lit subject with good range of depth and detail along the Z- axis.
- Set the camera's aperture to the largest available aperture (lowest F-stop) and take a picture.
- Set the camera's aperture to the smallest available aperture (highest F-stop) and repeat the picture.
- Select another subject and repeat the sequence.

Notes:

Reducing the aperture will mean that less light is allowed into the camera resulting in longer shutter speed times. This means that you must use a tripod to eliminate camera shake. It is a good idea to use the self timer mode on the camera to prevent camera shake caused by pressing the shutter button.

Examples:



Under Exposed



Correctly Exposed



Over Exposed

Depth of Field

The camera's aperture setting also controls the depth of field of your photos. Depth of field is the range of distance from the camera lens that appears in sharp focus. The smaller the aperture opening (or higher F-Stop number), the greater the depth of field (or larger range of focus). The larger the aperture opening (or smaller F-Stop number), the shallower the depth of field (small range of focus).



Shallow Depth of Field



Deep Depth of Field

ISO (“Film” Speed)

ISO refers to the speed at which the camera’s CCD captures the image. Lower ISO speeds (200) create a higher quality image but require longer exposure times. Lower speeds are well suited to brightly lit subjects and still life photos. Higher ISO speeds (1000 or higher) result in quick exposure times with slightly reduced quality. Higher speeds are suited to low light conditions or moving subjects

ISO speed

ISO refers to the speed at which the camera’s CCD captures the image. Lower ISO speeds (200) create a higher quality image but require longer exposure times. Lower speeds are well suited to brightly lit subjects and still life photos. Higher ISO speeds (1000 or higher) result in quick exposure times with slightly reduced quality. Higher speeds are suited to low light conditions or moving subjects.

Task:

- Select a subject.
- Use the camera controls to adjust the camera to the lowest available ISO speed and take a picture of your subject.
- Readjust the ISO speed to the highest available and take another picture of the subject.
- Select another subject and repeat the process.

Examples:



Low ISO speed



High ISO speed

Rule of Thirds



Rule of Thirds #1



Rule of Thirds #2

Lighting - 3 point

Camera Setup:

You will need to shut off the flash on the camera as you do not want it to interfere with the light set up. You will also need to adjust the camera's automatic exposure area. Under normal conditions the camera calculates its exposure settings based on the full frame of the photograph. Since you are using a dark background with a bright subject This will result in your subject being overexposed (too bright). You will need to change the cameras exposure area to spotlight mode so that it will calculate exposure based only on the subject.

Lighting Setup:

You will be using a 3 point lighting kit with a key light, a fill light and a back light.

The key light should be set at roughly a 45 degree angle (both vertically and horizontally) to your subject. With the key light aimed correctly your subject should be brightly lit with heavy shadow patterns caused by the nose and the eyebrows.

The fill light will be used to soften, but not eliminate, the shadows. It should be set at approximately a 45 degree angle on the opposite side from the key light. Aim the fill light away from the subject and use the umbrella reflector to reflect light onto the subject. With both key and fill lights on the subject should be well lit with light shadow patterns caused by the eyebrows and nose.

The background light should not be aimed at the subject. It will be aimed at the backdrop in order to light it evenly and eliminate any shadows caused by the key and fill lights.

Remember:

To use the camera's review feature to record the exposure settings, ISO, Shutter, Aperture and note the lighting conditions for each of your photos.

Lighting - 3 point continued

Task:

- Leave the stage lights on and take a picture of the subject.
- Turn on the key light, shut off the stage lights and take a picture of your subject.
- Turn on the key and fill lights, shut off the stage lights and take a picture of your subject.
- Turn on the key, fill light, and background lights, shut off the stage lights and take a picture of your subject.
- Adjust the lights to create a different lighting arrangement such as backlighting, lighting your subject from below or your own variation and take a picture. Make sure you make notes or sketch the new setup.

Set up examples:



1 Point Lighting



2 Point Lighting

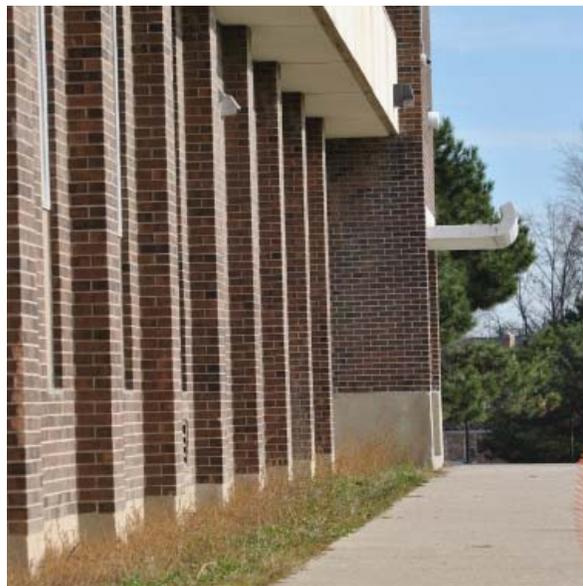


3 Point Lighting

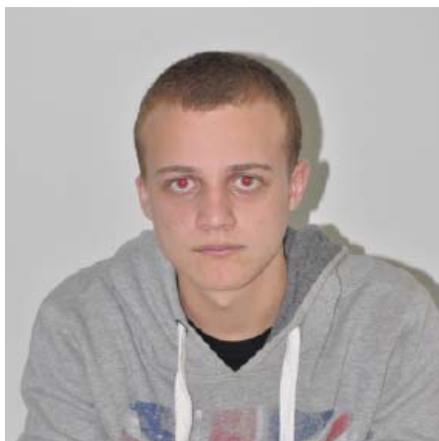
Lighting - Natural and Flash



Natural Lighting #1



Natural Lighting #2



Flash

Nikon vs. Canon

For taking portraits the Nikon camera would be considered better because it adds the warmer complexion to the person's face. The picture taken by the Canon is a lot more dull. But with the trees outside the Canon took a better picture. The Nikon's picture has an incorrect white balance and it appears to be washed out. I think that both camera's have different features that are better than the other. If you were someone who takes more portraits I would go with the Nikon but if you are looking to take more pictures of nature and outside I would go with the Canon. Both cameras have things the other doesn't so both are about equal.



Canon



Nikon

