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DepED
DEPARTMENT OF EDUCATION

SELF-LEARNING PACKAGE IN

ICT 10

Quarter 2| Week 3

Depth of Field in Photography

Learning Competency:

Demonstrate how to control depth of field

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WRITERS

Ready to Launch!

One of the most important concepts in photography is **Depth of Field**. DOF is the distance between the closest and farthest objects in a photo that appears acceptably sharp. Mastering depth of field requires basic understanding of f-stop, focal length, focus range, and camera lenses.

In this lesson, you will understand what DOF is, and know what are factors affecting it. Knowing this important concepts will widen your appreciation in photography.

Aim at the Target!

At the end of this module you are expected to:

1. *Explain what is Depth of field.*
2. Differentiate Shallow DOF from Deep DOF.
3. Identify how to get a Shallow DOF and Deep DOF.

Try This!

Gear Up! Let's see if you have ideas regarding this topic.

Activity 1. Direction. Write ***W*** for pictures that uses a wide angle shot and ***N*** for pictures that uses a narrow

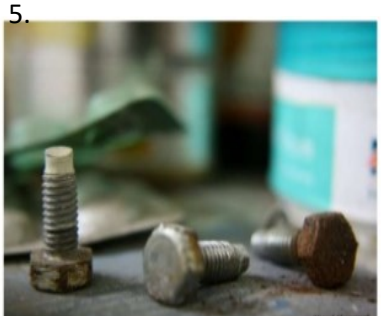
1.

2.

3.

4.

5.



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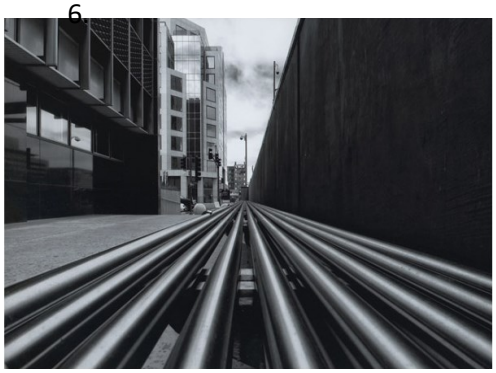
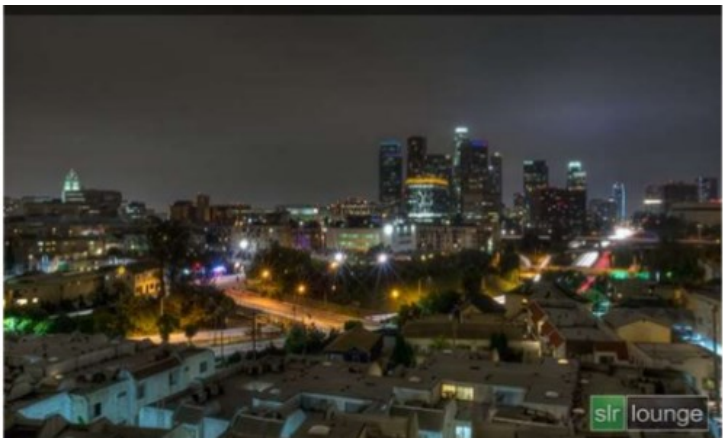


Keep This in Mind!

As mentioned earlier, Depth of Field determines the closest and farthest objects in an image, both of which are in focus. The entire image between these objects also maintains sharp focus. Pictures below are examples of depth of field.

Activity 2. Pictures comparison



Set A pictures

Set B pictures

ANALYSIS.

Direction. Observe carefully each sets of pictures above and answer the question below.

1. How do you compare the pictures in set A and set B?

Abstraction and Generalization

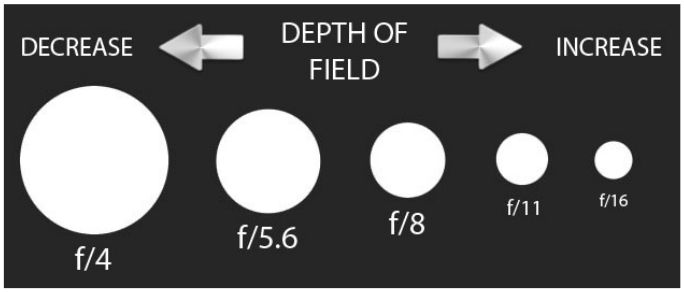
What is Depth of field?

Depth of Field is a major compositional tool used by photographers to direct attention to specific areas of a print or, at the other extreme, to allow the viewer's eye to travel in focus over the entire print's surface, as it appears to do in reality.

How to control Depth of Field?

1. **S**witch the size of the lens opening.

- Smaller f/stop numbers give you less depth of field.
- Portrait photographers often use an *Aperture Priority setting on their camera to get a shallow depth of field and a pleasing out of focus background. Using wide open f/stops like f/2.8 or f/4 will make your background less distracting because it will be more out of focus.*



A large lens opening like f/4 will give you less depth of field than a small lens opening like f/16.

- Landscape photographers frequently use big f/stop numbers to get a deep depth of field and make sure everything in the photo is in sharp focus.

2. Adjust the zoom setting on your lens.

Telephoto lenses or zooming your lens in with higher magnification will decrease your depth of field and wide angle lenses will give you a larger depth of field range.

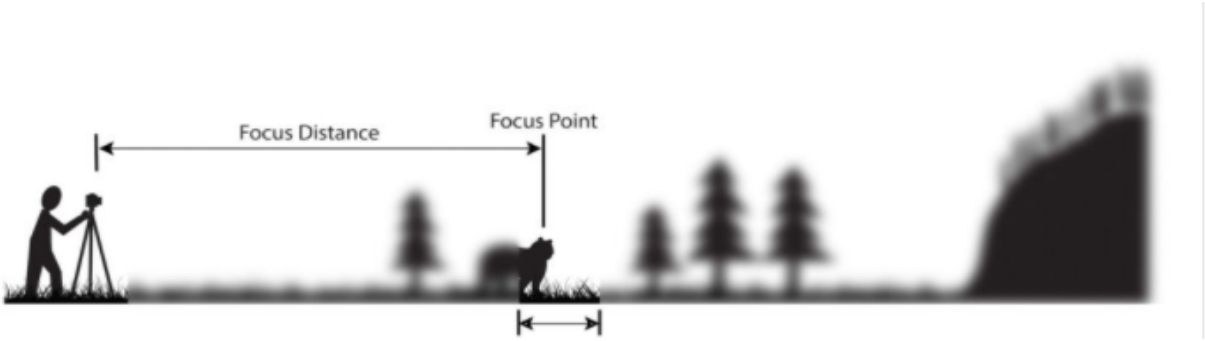
A longer focal length lens setting will give you less depth of field.

3. Change the distance to your subject.

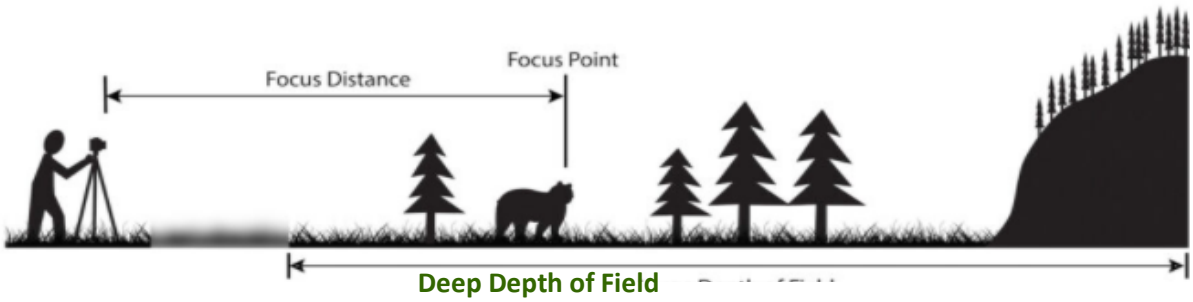
Depth of field is very limited when your subject is in close to your camera and is more significant when your focusing distance is farther away.

A close focusing distance will give you less depth of field.

Shallow DOF and Deep DOF Comparison



Shallow Depth of Field



Deep Depth of Field

In the above two sketches, shallow DOF has only the small slice of the image is in focus. Conversely, with a large DOF, much more of the scene is sharp.

What is Shallow Depth of Field?

- Shallow depth of field is achieved by shooting photographs with a low f-number, or f-stop — from 1.4 to about 5.6 — to let in more light. This puts your plane of focus between a few inches and a few feet. Depending on your subject and area of focus point, you can blur the foreground or background of your image.

How to get Shallow Depth of Field?

1. **Aperture– F/stop**
   - **Use the smallest f/stop** number you can. Small f/stop numbers like f/2.0 or f/4.0 will give you shallower depth of field.

This photo has extremely short depth of field range at f/1.8

2. **Focus distance**
   - **The closer the object that you focus** on is to the camera, the less depth of field you will have. As you'll see in a minute, super close distances like macro photography give you a very small range of things within your photo that are sharply focused.

In this photo, A smaller lens aperture was used and the background is still fairly out of focus, but sharp enough we can still identify the background as trees. Notice that in every one of these nature photos the sharply focused subject is placed near but NOT exactly in the middle of the composition.

3. Focal length

Use the longest zoom setting your lens is capable of. Use the longest lens or lens setting you have. Zoom in as close as you can. You may have to be positioned at a farther distance to fit your subject within the frame.

This portrait was set at 200mm focal length.

4. **Sensor size**

- You can't control this if you are only using one camera, but if you have a choice, use a camera with the biggest sensor. Full-frame sensors give you the best potential to minimize your depth of field.

Small sensor = Too much Depth of Field

Big sensor = Less Depth of Field

What is Deep Depth of Field?

- A **deep depth of field** is a larger area in focus, as it keeps more of the image sharp and clear.
- It is sometimes referred to a large depth of field. Because it has a larger field of view in focus, deep depths of field are best for landscapes. In order to capture such sharpness, a narrow aperture should be used. This means you make opening in the lens smaller by increasing the f-number.

How to get Deep Depth of Field?

1. **Use the smallest aperture**

Look at the comparison of depth of field in the three photos of the bottle caps above. Understanding the way f/ stop numbers work can be confusing at first because using a big f/stop number, like f/22, actually gives you a small aperture.

2. Avoid including superclose "macro" subjects

Depth of field can get really narrow when you photograph up close subjects. Landscape photography often involves composing your photo with objects both close and far from your camera, so a large Depth of Field is usually desirable.

In the beach photo at sunset the waves in the foreground are sharp as well as the distant boats and clouds. If the camera had been down low, super close to the water's edge, an even deeper depth of field would have been required to have everything in sharp focus.

It is a beautiful image and the composition may have been improved if the horizon did not divide the photograph in half. The reflection of the sun in the water does connect the top of the photo with the bottom of the photo nicely.

3. Shoot with a wide angle zoom setting

Wide angle lenses give you deep depth of filed

This tip for getting good depth is a little easier to understand. Due to the optical properties of camera lenses, The wider the angle of lens you use the more depth of field you'll get.

A very wide angle lens was used to take this dog's photo. You can see that even the dog's nose and the clouds in the far distance are both in focus. Wide angle lenses can also give you a very strong perspective and create very interesting photographs.

Application.

Direction: Write ***D*** if the pictures below is Deep Depth of Field and ***S*** if it is Shallow Depth of Field.

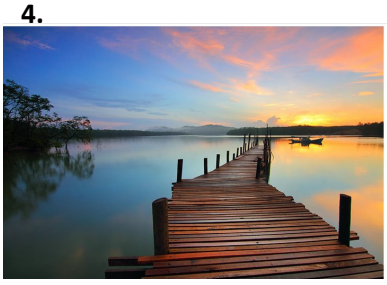
Activity 3. Identifying deep and shallow images

1.

2.

3.

4.



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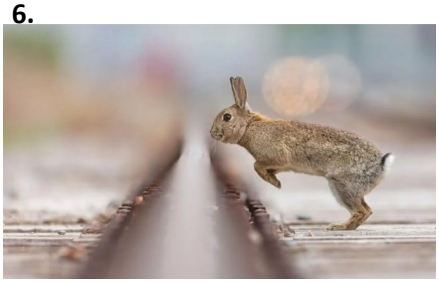

Reflect

Complete the statements below.

I understand _____I don't understand _____

I need more information about _____

Reinforcement & Enrichment

Direction. Observe carefully the pictures shown below and answer the given questions

Activity 4 Picture analysis

1. Describe in detail the comparison between the two pictures.

Assess Your Learning

I. Multiple Choice. Read each item very carefully. Select the **letter** of your choice.

1. Which one of the following has the biggest aperture size?

A. f/2.8 

B. f/5.6 

C. f/11 

D. f/32 

For numbers 2-6, use the choices in number 1,

2. What is the aperture size use for Deep Depth of Field?
3. Which one of the following has the smallest aperture size?
4. What is the aperture size use for Shallow Depth of Field?

What aperture size is used in these pictures:

5. 

6. 

7. Which one of the following is considered the most important component of Depth of Field?
   a. focus distance b. focal length c. subject d. aperture

8. Which one of the following statement is **FALSE** about Depth of field?
   A. Small sensor would result to too much Depth of Field
   B. Aperture sizes doesn't matter in depth of field
   C. Big sensor can create less Depth of Field
   D. All of the above

II. Essay.

1. Give three reasons why Depth of Field is important in photography? (**5 points)**

References & Photo Credits

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