

# 10



SELF-LEARNING PACKAGE IN

## ICT 10

### Lighting in Photography

Quarter 2 | Week 2

#### Learning Competency:

Demonstrate the effects and direction of light.

MARICAR R. PORNEL, Oton NHS  
ZALDY M. TONDO, Division Science Coordinator  
WRITERS

GOVERNMENT PROPERTY  
**NOT FOR SALE**



## Ready to Launch!

One of the basic elements for creating photographs is **light**. Without light you cannot expose a clear image. Light brings out the sharpness, details and colors in images, so it is important to get enough of it to make a good exposure.

Photography originated from a chemical reaction that occurred when light hit certain materials, and while the cameras inside our smartphones have come a long way from the first room-sized cameras, the essence of photography has remained the same: **light**. Whether you are shooting film or digital, you cannot shoot anything without light.



## Aim at the Target!

*At the end of this module you are expected to:*

1. Explain the primary factors to consider for lighting.
2. Differentiate direct, diffused, and reflected lights.
3. Describe studio lighting and accessories.



## Try This!

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

Activity 1. Direction. Unscramble the following words to identify the name of each lighting equipment as shown in the picture.



1. OTSFXBSEOB



2. OFEETLRCR



3. MALBLUER



## Keep This in Mind!

Direction. Observe each of the following pictures below. Pictures on the left side depicts the set-up in a studio, while those on the right side are the output.

### Activity 2. What's in a photo shoot?



Photo shoot 1



Photo shoot 2

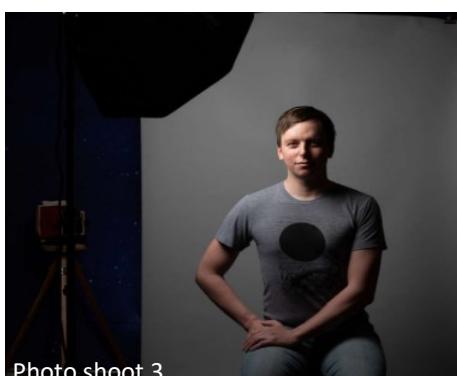


Photo shoot 3



### ANALYSIS.

1. How do you describe the preparations made for each of the photo shoots?
2. What is the effect of light in the output pictures?

## Abstraction and Generalization

### What is Lighting?

- Light is the essential ingredient of photos.
- One of the skills that separates photographers from snap shooters is the ability to solve lighting problems.
- There are 2 primary factors to consider for light: **DIRECTION AND COLOUR**.

### Lighting—Direction (Where is the light coming from—the front, the side, or behind? )

The direction of light has a tremendous amount to do with creating a sense of shape and texture in your images. To be a bit more precise, the direction of light controls the width of the shadows. And it's the shadows that create a sense of shape and texture in your photographs.

- The direction the light comes from bottom lighting can make the image seem flat or 3-dimensioanl.
- Front lighting is easy to photograph, but images are generally flat.
- Top lighting, such as from the sun overhead, also makes the image flat, and shadows are short and dark.
- Side lighting will emphasize texture and contours, and create long shadows.



FRONT LIGHTING



SIDE LIGHTING



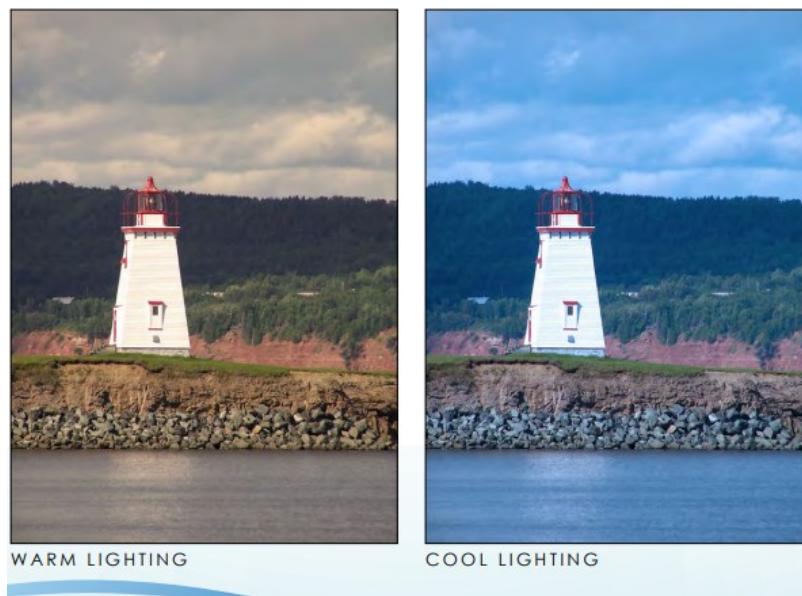
TOP LIGHTING



BOTTOM LIGHTING

## Lighting—Color

- The color of light is measured by temperature in Kelvin ( $^{\circ}\text{K}$ )
- The color of natural light changes through the day.
- Humans respond psychologically to different colours, therefore the color of a photo will affect emotional responses.
- Light that is in the red, orange and yellow is said to be “warm”. Conversely, “cool” light is blue in tone.



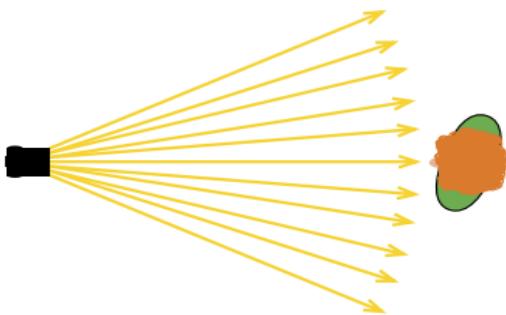
- When taking a photo with a digital camera, the white balance setting of a camera will affect the colour cast of the image, balancing the lighting of the subject.
- Typical white balance settings of a camera include: TUNGSTEN, FLORESCENT, SHADE, SUNNY CLOUDY, FLASH, AUTO AND MANUAL.
- Filters can also be used to affect the colour of light in the image.



## Direct, Diffused, and Reflected Light

### Direct light

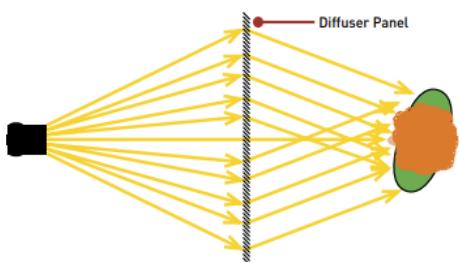
- Direct light flies straight from the light source to the subject (Figure 1.4).
- Direct light typically creates shadows with high contrast and hard edges. Sunlight on a clear day is direct light. Light from an on-camera flash can also be direct light.



**IN THIS PHOTO.** Light coming directly from a source to the subject will have dark shadows with a hard, defined edge.

### Diffuse light

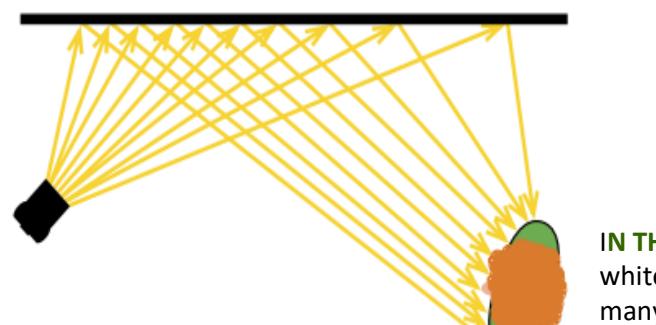
- Diffused light passes through a semi-transparent material on the way from the source to the subject.
- Diffused light creates shadows with lower contrast and softer edges than direct light. Depending upon the amount of diffusion, it is possible that the shadows will be so light that you can barely see them.
- Clouds are a great example of how sunlight can be diffused. The water vapor causes the light to bounce around and come at the subject from many angles rather than directly from the sun. A sheer curtain over a window is another example of a light diffuser.



**IN THIS PHOTO.** Light that passes through a semi-transparent material, like a cloud bank or diffuser panel, will come at the subject from many angles. This light will have soft shadows.

### Reflected lights

- Reflected light bounces off of an opaque surface before it hits the subject. Sunlight bouncing off the concrete wall of a building is reflected light.
- Sunlight bouncing off clouds can create reflected light. Photographers can use white foam core panels or fabric reflectors in a variety of colors to bounce light. Hot-shoe mounted flashes often have the ability to tilt and pan so that the flash can be bounced off a nearby wall or ceiling.
- Like diffused light, reflected light is softer than direct light.



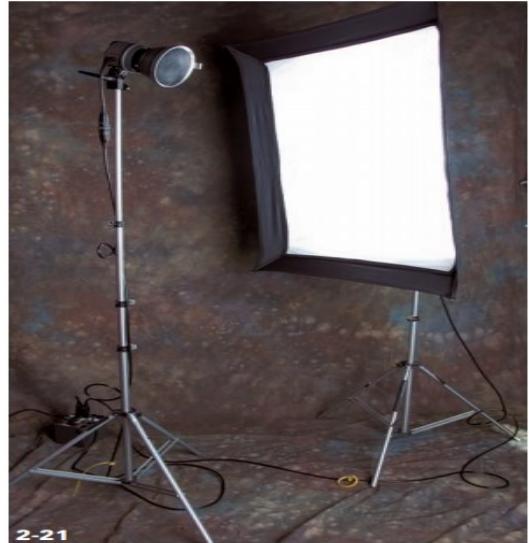
**IN THIS PHOTO.** Light that bounces off a surface, like a white wall or ceiling will also come at the subject from many angles and have soft shadows.

## Studio Lighting and Accessories

Studio lighting takes many forms. Photographers have used all manner of lighting to create images, everything from window light, to open light bulbs, halogen lamps, and even candles. These light sources are different and effective, but the most powerful and flexible light source are **strobe units**.

### Studio Strobes

Studio strobes are several times more powerful as compared to even the largest of on-camera units, and they built specifically to have *light shapers* to them. Light shapers are things like umbrellas, reflectors, and softboxes that alter the light quality of a studio strobe. Some of these units are compact enough to allow several units to fit into a small case, and others are very heavy, large, and rarely leave the studio. Most studio strobes are powered like any other electrical equipment, although some are able to use battery power. A small set of studio strobes are shown in 2-21.



**ABOUT THIS PHOTO.** The light on the left has a reflector with a grid that creates a direct spot. A soft box is attached to the light on the right, which gives out a soft, wrapping light.

### Lighting accessories:

Light shapers, such as umbrellas, soft boxes, reflectors, and the like, come in all shapes and sizes depending on the desired effects. They all change the quality of light in different ways.

#### • Umbrella

- An umbrella attached to a strobe can create a number of lighting effects.
- Umbrellas can be large or small and white, silver, or gold. A large silver umbrella attached to the strobe, so that the light bounces into the umbrella, spreads the light. This light source is great for photographing a group of people and can be made even better with lights on either side of the group.



#### • Soft boxes

- create a soft pleasing light when attached to studio strobes. They have a large translucent panel in front of the flash, and the rest of the box is closed at the strobe, so the light bounces around inside, further the light and making them very efficient.



- **Reflectors**

A reflector is simply a tool that reflects light. A reflector doesn't create light like a flash does, it simply redirects the existing light, or sometimes redirects the light from a flash or studio strobe.

**Important notes about reflectors:**

1. Light from a reflector isn't any brighter than what is already there, so you can't use them to light up a night portrait unless you are also using a flash or other light source as well.
2. The quality of the light will match the quality of the light that's in the scene. For example, if you're shooting at sunset, the light that bounces off the reflector will have that same orange hue.

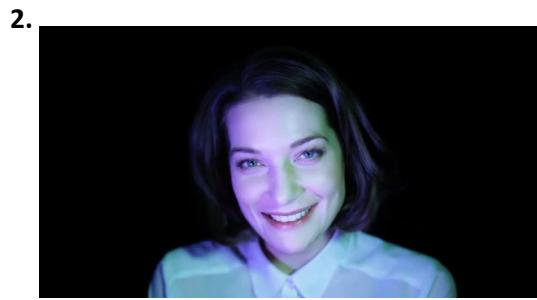
Reflectors come in different types and colours, and the colour of the reflective surface may change the light that's bounced back.

- A. **White reflector** simply bounces the light, and the light is nice and soft.
- B. **Silver reflector** doesn't change the color of the light much, but it is a bit brighter than light reflected off a white one.
- C. **Gold reflectors** are designed to change the color of the light by warming it up a bit with an orange tone.



## Application.

Activity 3. Direction: Identify what type of light direction was used to capture the pictures below.





## Reflect

Complete the statements below.

I understand \_\_\_\_\_

I don't understand \_\_\_\_\_

I need more information about \_\_\_\_\_



## Reinforcement & Enrichment

### Activity 4. Picture analysis

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



Picture 1



Picture 2

1. Describe the details of picture 2 in terms of its light direction, balance settings of the camera , and the light accessories used during the photo shoot.
2. What have you observe with picture 1? As a photographer enthusiast, how would you improve it?



## Assess Your Learning

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

1. What type of light direction would you use to emphasize a subject's textures flat and three-dimensionality?  
a. front      b. side      c. top      d. bottom
2. What effect can the red, yellow, and orange colors create?  
a. warm      b. intense      c. diffuse      d. cool
3. You can only use natural light to take photos.  
a. True      b. False
4. A reflector is a tool that create lights.  
a. True      b. False
5. A type light that bounces off the surface where the light will reflect at the same angle as it hit the surface.  
A. diffuse      b. direct      c. Studio strobe      d. reflected

**II. Essay.**

1. What is the importance of light in photography? ( **5 points**)



## References & Photo Credits

- <http://ptgmedia.pearsoncmg.com/images/9780321832757/samplepages/0321832752.pdf>  
<https://carleton.ca/healthy-workplace/wp-content/uploads/Intro-to-Photo-presentation-20112.pdf>  
<http://alexdanev.com/forum/Books/LIGHTING%20Photo%20Workshop.pdf>  
<https://www.creativelive.com/photography-guides/lighting-for-beginners>  
<https://www.shawacademy.com/blog/a-beginners-guide-to-lighting-a-photo-with-a-reflector/>  
<https://medium.com/hd-pro/photography-lighting-part-1-studio-portraits-8eede19d5a4d#:~:text=When%20shooting%20in%20studio%2C%20strobes,the%20photographer%20wants%20to%20create.>  
REFLECTOR. <https://www.videomaker.com/article/14580-video-and-photography-light-reflectors>  
REFLECTOR. <https://www.amazon.com/Etekcity-Collapsible-Multi-Disc-Photography-Reflector/dp/B00DIHSZCC>  
LADY PHOTO SHOOT <https://paintthemoon.net/2014/04/photographing-full-sun-paint-moon-photoshop-actions/>  
UMBRELLA . <https://www.rollingstone.com/product-recommendations/lifestyle/best-photography-continuous-lighting-kits-1037751/>  
SOFTBOXES. <https://www.bhphotovideo.com/explora/photography/tips-and-solutions/softbox-introduction>  
UMBRELLA. <https://westcottu.com/large-vs-small-photographic-umbrellas>  
LIGHTING STUDIO. <https://lumoid.com/guides/light-modifiers>  
FRONT LIGHT PHOTO SHOOT. <https://www.clickinmoms.com/blog/types-photography-lighting/>  
SIDE LIGHT PHOTO SHOOT. <https://i.pinimg.com/originals/b2/6b/20/b26b2097f189a88e676cca55e48fe2a3.jpg>  
BOTTOM LIGHT PHOTO SHOOT. <https://petapixel.com/2013/04/16/trippy-video-shows-how-a-persons-face-changes-depending-on-the-lighting/>  
TOP LIGHT PHOTO SHOOT. <https://www.popphoto.com/gallery/top-10-photography-lighting-facts-you-should-know/>  
STUDIO PHOTO SHOOTS. <https://www.borrowlenses.com/blog/portrait-lighting/>