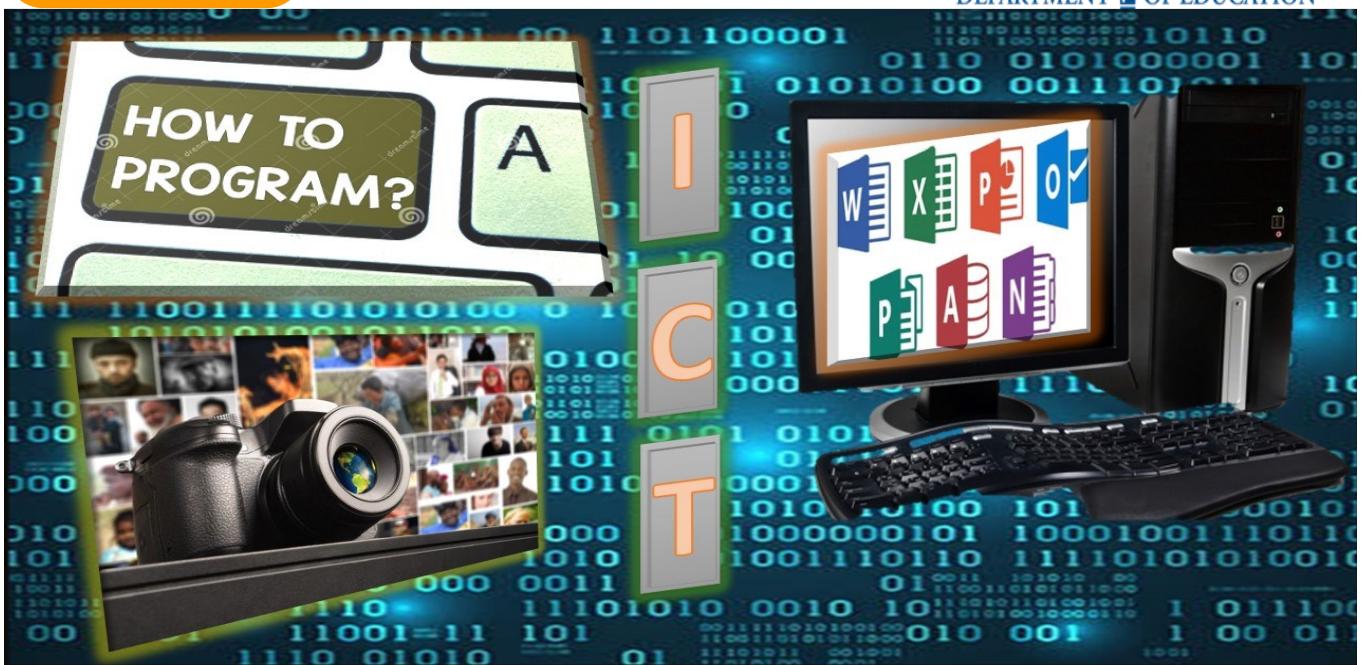


# 10



SELF-LEARNING PACKAGE IN

## ICT 10

*Quarter 1 | Week 2*

**Basic parts of a camera**

**Learning Competency:**

Identify the basic parts of a camera.

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## Ready to Launch!

Digital cameras are normally used to capture still picture or take videos through the use of an electronic image sensor. An optical system is built inside the camera which uses a variable length camera lens which is mainly used to focus light on the image capturing device. The length of the diaphragm and the shutter controls how much amount of the light will be utilized. In digital camera, the image capturing device is an electronic device whereas a chemical device was used in normal old age film cameras. Modern digital cameras have several amazing features which has made them become so popular in these days. There are many types of digital cameras which are available in the market such as the point & shoot, advanced point & shoot, SLR, mirror less etc. Sony, Canon, Panasonic and Nikon are just some examples of the best digital camera manufacturers in today's market.

In this lesson, you'll learn the different parts of a camera and its function.



## Aim at the Target!

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

1. Identify the parts of a camera.
2. Explain the functions of each part of the camera.

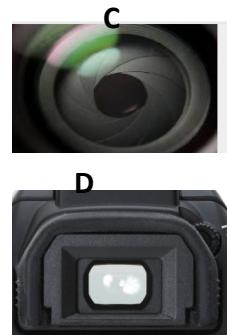


## Try This!

**Activity 1.** Direction. Below are some basic parts of a camera. Match the name to its corresponding picture.

Select the letter only.

1. APERTURE
2. MEMORY CARD
3. VIEWFINDER
4. FLASH



## Keep This in Mind!

Most cameras can be grouped into four main types: **digital SLR (or DSLR)**, **point-and-shoot**, **bridge cameras**, and **camera phones**. Each type has advantages and disadvantages, and some types are more expensive than others.

There are 10 basic **camera parts** to identify in today's digital world. Whether you have a digital compact or a digital SLR, these parts will inevitably be found on most cameras.

### Activity 2. Getting to know your camera

Direction: Identify the name of the camera. Select the answer of your choice from the box. Number 1 is done for you.

Note. Underlines are hints

- |                                      |                    |
|--------------------------------------|--------------------|
| A. DSLR (Digital Single-lens reflex) | C. Bridge camera   |
| B. Mirrorless interchangeable lens   | D. Point and shoot |
|                                      | E. Camera phone    |



1. Camera phone

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

# Abstraction and Generalization

## Basic Parts of a Camera

### 1. Lens

The lens is one of the most vital parts of a camera. The light enters through the lens, and this is where the photo process begins. Lenses can be either fixed permanently to the body or interchangeable.

They can also vary in focal length, aperture, and other details.

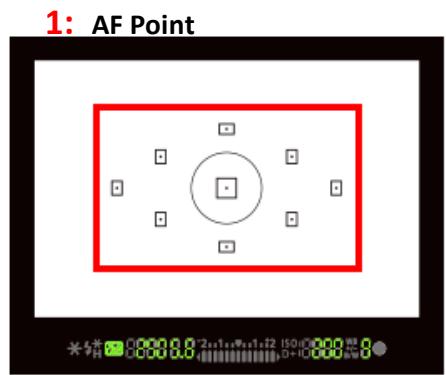
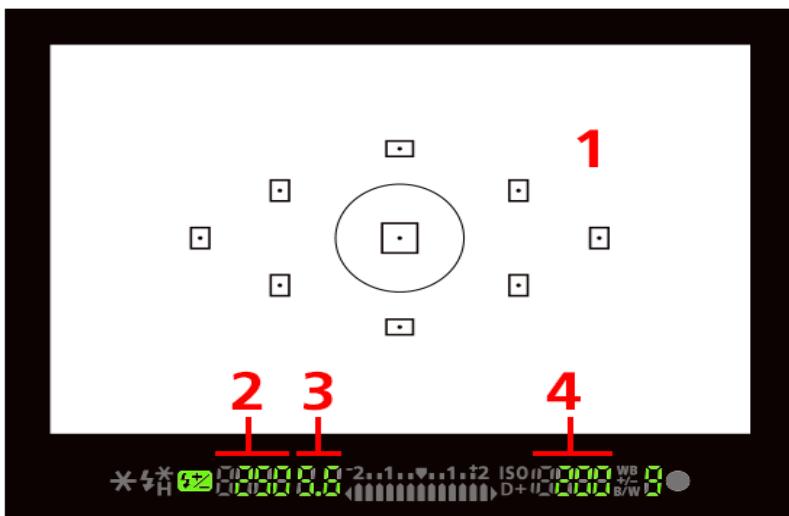


### 2. Viewfinder

The viewfinder is the area on the camera that you look through in order to compose your shot. For some cameras, an LCD screen is used as a viewfinder, or your camera may have the option to use either one. Once your photo is taken, it may not look exactly like what you see through the viewfinder. Factors such as lighting, lens, camera settings and your camera's capabilities will affect the finished result. Because of this, the viewfinder is not intended as a preview of your photo, but rather a tool to aid you in taking it. You, as the photographer, determine the final result.

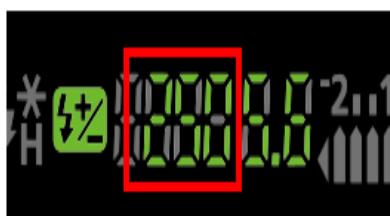


## Viewfinder Display



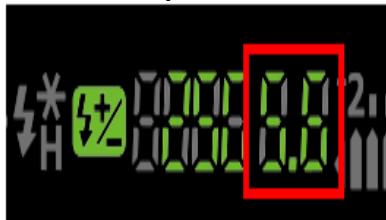
Indicates the position of the focus during AF (autofocus) shooting. The selected AF point will be highlighted in red. You can choose to select an AF point automatically or manually.

## 2: Shutter Speed



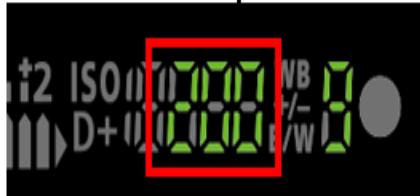
Indicates the time interval during which the shutter is open. The shutter speed values is denoted in the “1/parameter” format. However, only the parameter value is shown in the viewfinder. Increasing the parameter value shortens the time intervals the shutter remains open. Shutter speeds slower than 1/4 second are indicated as for example, 0”3, 0”4, 0”5, 0”6, 0”8, or

## 3: Aperture Value



This value indicates the extent to which the aperture blades inside the lens are open. A smaller value the aperture means is more widely open, which allows more light to be captured. The selectable aperture value range varies according to the lens in use.

## 4: ISO Speed



The ISO speed setting varies constantly when the Auto setting is selected. A higher ISO speed makes it easier to capture shots of a dimly- lit scene.

## 3. Aperture

Aperture is referred to the lens diaphragm opening inside a photographic lens. The size of the diaphragm opening in a camera lens REGULATES amount of light passes through onto the film inside the camera the moment when the shutter curtain in camera opens during an exposure process. The size of an aperture in a lens can either be a fixed or the most popular form in an adjustable type (like an SLR camera). Aperture size is usually calibrated in **f-numbers** or **f-stops**. i.e. those little numbers engraved on the lens barrel like f22 (f/22), 16 (f/16), f/11, f/8.0, f/5.6, f/4.0, f/2.8, f/2.0, f/1.8 etc. Each of this value represents one time the amount of light either more or less in quantity. Meaning to say, f/16 will let in **1X** the amount of light than a diaphragm opening of f/22 and so forth; while on the other hand, an aperture of f/4.0 will let in **1X** lesser than that of f/2.8 etc.



#### 4. Shutter Release

The shutter release button is the mechanism that “releases” the shutter and therefore enables the ability to capture the image. The length of time the shutter is left open or “exposed” is determined by the shutter speed.

Note. You can try this link to watch demo of Shutter release .  
[https://www.aliexpress.com/  
i/32829887166.html](https://www.aliexpress.com/i/32829887166.html)



#### 5. Body

The body is the main portion of the camera, and bodies can be a number of different shapes and sizes. DSLRs tend to be larger bodied and a bit heavier, while there are other consumer cameras that are a conveniently smaller size and even able to fit into a pocket.



DSLR camera body

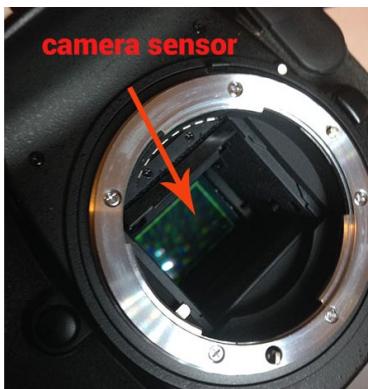


Mirrorless camera body



SLR camera body

#### 6. Image Sensor



The image sensor converts the optical image to an electronic signal, which is then sent to your memory card. There are two main types of image sensors that are used in most digital cameras: CMOS and CCD. Both forms of the sensor accomplish the same task, but each has a different method of performance.

## 7. Memory Card

The memory card stores all of the image information, and they range in size and speed capacity. The main types of memory cards available are CF and SD cards, and cameras vary on which type that they require.



## 8. LCD Screen

The LCD screen is found on the back of the body and can vary in size. On digital compact cameras, the LCD has typically begun to replace the viewfinder completely. On DSLRs, the LCD is mainly for viewing photos after shooting, but some cameras do have a “live mode” as well.

## 9. Flash

A flash is a device used in photography producing a flash of artificial light at a color temperature of about 5500 K to help illuminate a scene. A major purpose of a flash is to illuminate a dark scene. Other uses are capturing quickly moving objects or changing the quality of light.

The on-board flash will be available on all cameras except some professional grade DSLRs. It can sometimes be useful to provide a bit of extra light during dim, low light situations.



## 10. User Controls

The controls on each camera will vary depending on the model and type. Your basic digital compacts may only have auto settings that can be used for different environments, while a DSLR will have numerous controls for auto and manual shooting along with custom settings.



## Application.

Direction: Let's familiarize the basic parts of the camera by searching its name into the search grid. One name was identified for you.

Activity 3. Word Search

S	H	U	T	T	E	R	R	E	L	E	A	S	E
W	E	R	H	Y	U	I	K	M	F	P	G	H	W
T	R	Q	V	I	E	W	G	N	E	T	E	F	P
U	S	E	R	C	O	N	T	R	O	L	F	S	F
I	S	R	O	S	E	B	T	B	T	H	D	F	G
R	E	E	U	V	G	U	E	S	Y	X	O	B	O
O	N	L	S	I	R	F	G	T	D	L	D	N	Y
S	I	D	E	E	O	I	D	R	R	I	S	E	H
N	L	Q	R	W	M	N	R	A	A	N	A	E	E
E	R	W	C	F	A	A	L	P	C	E	F	R	L
S	O	R	O	I	N	R	D	M	D	S	R	C	L
E	L	L	E	N	S	E	S	E	C	K	E	S	O
G	O	F	V	D	E	M	F	M	L	B	O	D	Y
A	C	G	B	E	T	A	L	P	W	I	D	C	O
M	E	M	O	R	Y	C	A	R	D	E	D	L	U
I	F	L	A	S	H	M	S	Y	W	W	C	T	M
I	M	A	G	O	F	J	H	E	T	F	L	G	I



## Reflect

Complete the statements below.

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

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

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



## Reinforcement & Enrichment

Activity 4. Direction: Identify what part of a camera is shown by each picture below and explain its importance in taking pictures.

1



2



3



4





## Assess Your Learning

- I. True or False. Write T if the statement is true and F if the statement is false.
1. Lenses can be either fixed permanently to the body or interchangeable.
  2. Flash is the area on the camera that you look through in order to compose your shot.
  3. ISO speed Indicates the position of the focus during AF shooting.
  4. The length of time the shutter is left open or “exposed” is determined by the shutter speed.
  5. Aperture size is usually calibrated in *A-numbers* or A-stops.

II. Match Column A with Column B. Select the letter only.

### COLUMN A

1. Refers to the opening of a lens diaphragm through which light passes.
2. Converts the optical image to an electronic signal.
3. Useful to provide a bit of extra light during dim, low light situations.
4. This value indicates the extent to which the aperture blades inside the lens are open.
5. Indicates the time interval during which the shutter is open.

### COLUMN B

- A. Body
- B. Aperture
- C. Shutter value
- D. Viewfinder
- E. Lens
- F. Flash
- G. Shutter Speed



## References & Photo Credits

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