



Notes

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335en25B

INTRODUCTION TO PHOTOGRAPHY

We all love seeing photographs especially if they are of our friends and family. Wouldn't you love your photograph to be taken? We have always desired to see a copy of ourselves on paper. Do you realise that this was not possible for a long time and it was left to the artists to draw our images and even then the pictures were never exactly the same. This was also a very tiring and time consuming process and not every one could afford it. Only kings and other important people got their pictures made by artists. Just imagine what excitement photography must have caused when it was discovered. People could now see an exact copy of a scene or of a person in front of them.

From such times to now photography has come a long way. It is both a recreation as well as a profession. We are used to seeing photos being taken all around us.



OBJECTIVES

After studying this lesson, you will be able to do the following :

- discuss the scope and significance of photography;
- explain the evolution and history of photography ;
- define the term photography;
- differentiate between film and digital photography.

25.1 SIGNIFICANCE OF PHOTOGRAPHY

You always see photographs around you. Behind the bus, on the sign boards, on the walls, in newspapers and magazines. Photos in newspapers and magazines inform us about an event or an incident. Remember the tsunami? You must have seen its pictures on newspapers as well as on television. It was these pictures that gave us information about such a big disaster.



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These days pictures are as important to news as the written or printed word. In fact in a country like ours where still many people cannot read or write, photos have a greater use and a greater impact. Photographs are seen along with the written news in magazines and newspapers and they add to the impact of the news and convince us about the truth of the event we are reading about.

Have you ever wondered how these photos are taken? You will learn about it in this lesson.

25.2 EVOLUTION AND HISTORY OF PHOTOGRAPHY

We all know that right from pre-historic times when man began communicating, he started drawing images. This idea of pictures grew from refined drawing and to paintings. In the first half of the nineteenth century, the technology of photography was invented. We could at last make pictures that were exact copies of a scene or a person. The camera along with the film made photography a reality. Human beings have known for a long time of a device which has shown an outside image on a wall or a screen but the moment the light was gone, the image has disappeared. Such a device is called a *pin-hole camera* or the *camera obscura*.

Have you tried projecting an image with the help of a pin hole camera? This is how you can do it. Take a long box and make a hole at one end of the box. On the other side paste a white tracing paper. Now if you point this box out towards a scene, its inverted image would fall on the tracing paper. This pin-hole camera was invented by the Greeks in ancient times and people through ages have used it. What really made photography possible was the discovery of chemicals that could record the effect of light and make the picture permanent, so that it may not fade away with time.

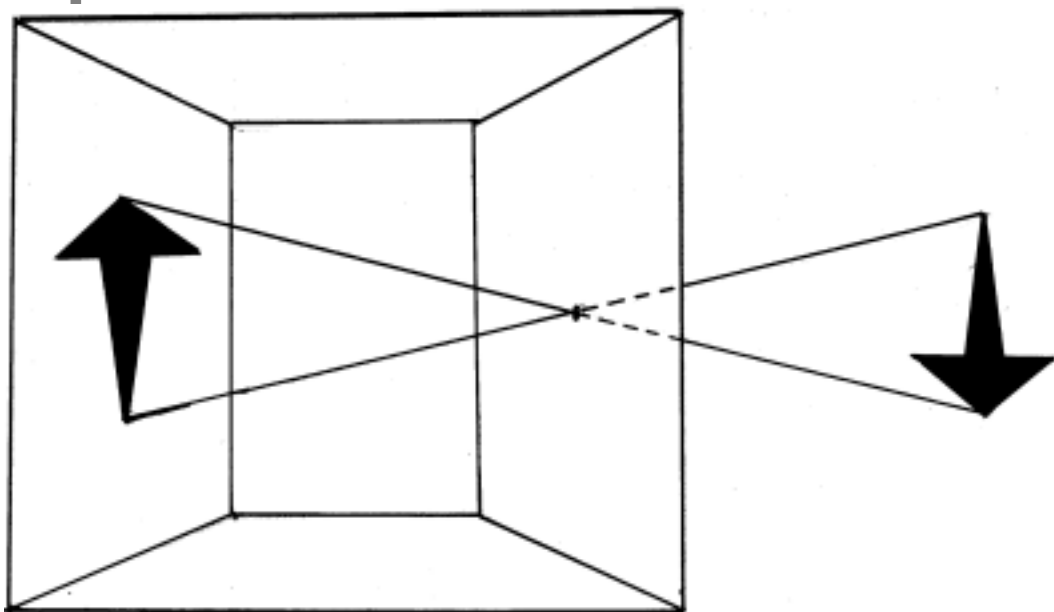


Fig. 25.1: Pin hole camera



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As you have already studied, modern photography was invented by two Frenchmen Joseph Niepce and Louis Daguerre. It was in 1827 that Niepce took what we know of as the first photograph. Do you know that the film had to be exposed to the scene for seven hours to make this one picture, whereas today we can do the same with the click of a button! Niepce's partner Louis Daguerre made further improvements to the technology of taking photos and since 1839 photography became available to everyone who wanted to try it.

It must be mentioned here that for the first fifty years photography was nowhere as easy as we think of it today. The cameras were huge and had to be kept on a stand to be operated. Your great grandparents would have had to go to a studio where they would have had to sit still in front of the camera to have a photograph made. It was much later in the 1900s that easy to use light cameras were made which could be carried anywhere with ease and used without the support of a stand.



Fig 25.2 : (a) Old camera on stand



Fig 25.2 : (b) new camera

25.3 DEFINITION OF PHOTOGRAPHY

Photography literally means 'drawing with light.'

As you can make out the word 'photography' is made of two words. Whereas 'photo' means 'light', 'graphy' stands for 'graphic' which means drawing. So once man learnt to copy an image with the help of a camera, the process started being called photography.



INTEXT QUESTIONS 25.1

1. Define photography.



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2. Fill in the blanks with the appropriate word in the blank space:
 - i) Photographs are as important to news as the _____ word.
 - ii) Photography was invented by two people from _____.
 - iii) _____ camera allows us to project the image of a scene on a surface.
 - iv) Early cameras were big so they had to be kept on a _____.
 - v) The word 'graphy' means _____.
3. Mention three photographs that you saw recently and liked them.

**Activity 25.1**

Try to make a simple pin-hole camera with the help of suggestions give in section 25.2.

25.4 FILM PHOTOGRAPHY

As you have learnt earlier, photography has two important components; one is the camera and the other is the film. A film is sensitive to light, so when we expose it to a scene with the click of the button, the impression of light is left on the film. This film is then processed in the laboratory and we see the picture that we have taken.



Fig 25.3: photoclick to final print

Do you remember watching photographs of your grandparents that do not have any colour but are in black and white? Even in newspapers one comes across such photos. For a long time photography was just black and white, this was so as the film could not record colour. It was much later that the colour film was made.



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You may be able to recall an occasion from your childhood like your birthday party or a trip to some interesting place where you or your parents took pictures. On your return you must have given the film roll to a photo lab and then collected the printed pictures after a day. Have you ever wondered what is happening inside the lab? Here the film is taken out of its container in complete darkness. As the film has a layer of light sensitive chemical on it, the chemical is given a wash with certain other chemicals. This helps in bringing out the picture on the film because the effects of all the chemicals are washed away and the image on the film is fixed and made visible to the eye. Now the image on the film is in the form of a negative, meaning the dark areas appear light and the light areas appear dark. Now light is thrown through the negative film on to a photographic paper that is sensitive to light in the same way as the film was sensitive to light. This paper is also given a chemical wash thus creating the final picture. So you see that from taking the picture to the final print there are many stages involved. Since the negative film acquires an image with the help of light, it is called an optical process.

(a) Modern Camera



(b) Modern film roll

Fig. 25.4



Fig. 25.5 (a) Negative image



Fig. 25.5 (b) Printed positive image



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25.5 DIGITAL PHOTOGRAPHY

Nowadays a new technology has arrived in photography and it is called **digital photography**. Some of you and your friends maybe possessing a digital camera.

The camera which you see inside some mobile phones is also a digital camera.

Soon it seems that the film camera which is mentioned above may stop being made as the digital camera is making photography cheap and easy to handle. There are two important factors that make digital photography very useful. One is that the picture taken can be seen on a screen behind the camera immediately and the second reason is that digital photography does not require any film. Therefore there is no need to go to the lab and wait to get the film processed.

The camera records the image taken on a memory chip that is inside it. Once the chip is filled with the photos, these photos can be copied onto a computer to reuse the camera by making fresh space for taking more photographs. The ability of the camera to link itself to the computer makes it easy to print the picture and to send pictures to any part of the world through the internet. Not only this, the computer allows the photograph that has been taken to be improved and cleaned with the help of a number of software programmes that are available. So you can see that the future of photography is going to be digital.

Let us list the differences between a film and digital camera.

Table 25.1

Film camera	Digital camera
1. records image on a chemically sensitive film to make a picture negative	records the photo as a digital signal that is stored on a chip.
2. a film has to be processed into an optical negative	a digital image can be instantly seen on the camera. No processing is required and so there are no negatives.
3. a film camera is bigger and can work without batteries	a digital camera is much smaller and always need batteries
4. pictures from a film camera have to be printed in a lab.	photos from a digital camera can be copied on a computer and printed as well
5. pictures from a film camera have to be physically sent and this can take time.	photographs from a digital camera can easily be sent through a computer by e-mail



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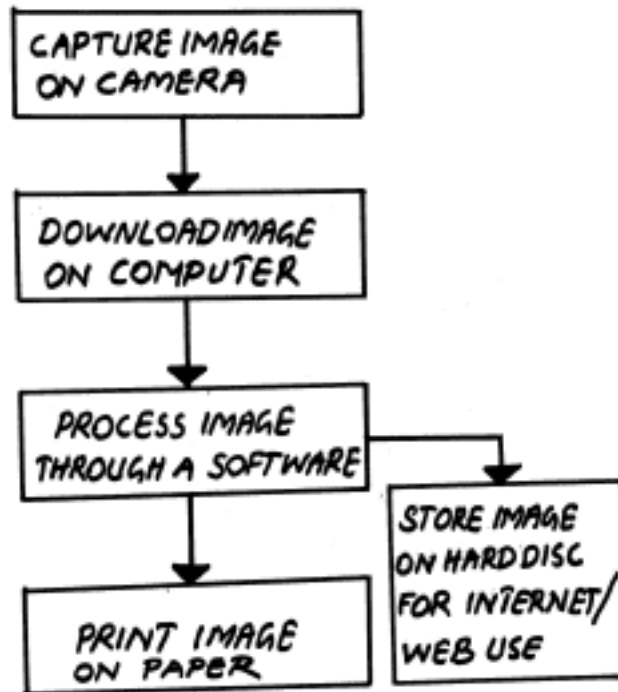


Fig. 25.6 : Digital work flow

**INTEXT QUESTIONS 25.2**

1. Fill in the blanks with the appropriate word in the blank space:
 - i) A film camera uses film that is sensitive to _____.
 - ii) The camera you see inside mobile phones is a _____ camera.
 - iii) In a film negative, the dark areas of the picture taken appear _____.
 - iv) A digital camera is _____ than a film camera.
 - v) A digital camera stores signals on a _____.

**Activity 25.2**

- 1) Try and find a film negative and see how it looks.
- 2) Visit a photo studio near your house and see how it functions.

**WHAT YOU HAVE LEARNT**

- Significance of photography
- importance of pictures in news
 - impact of pictures



Notes

- Evolution and history
 - from drawing to painting to photography
 - projecting an image with a pin-hole camera
 - invention of modern photography
- Definition of photography
- Film photography
 - film camera
 - black and white photography
 - colour photography
 - technology involved
- Digital photography
 - digital camera
 - technology involved

**25.7 TERMINAL EXERCISES**

1. What do you understand by the term 'photography'. Explain the significance of photography in our day to day life.
2. Describe the history and evolution of photography ?
3. Illustrate the differences between film and digital photography .

**25.8 ANSWERS TO INTEXT QUESTIONS**

- 25.1** 1. Photography literally means 'drawing with light'. The word 'photography' is made of two words. Whereas photo means light, graphy stands for 'graphic' which means drawing.
2. (i) written (ii) France (iii) pinhole camera (iv) stand (v) drawing
 3. The answer would vary from learner to learner.
- 25.2** 1. (i) light (ii) colour (iii) light (iv) smaller (v) chip