PARTS OF A CAMERA 2019

1) THE VIEWING SYSTEM shows what will be in the picture, most often through a set of lenses, or through the actual picture-taking lens.
2) THE FILM (or DIGITAL SENSOR) receives and records the image of the object being photographed on its light-sensitive surface.
3) THE FILM ADVANCE winds film onto the take-up spool from the original cartridge.
4) THE CAMERA BODY is the housing for the various parts of the camera and keeps light from the film.
5) THE DIAPHRAGM, or APERTURE, is a device to control the amount of light entering the camera by means of overlapping metal leaves forming an adjustable hole.
6) THE SHUTTER, the other light control, is a protective shield which slides open to allow a measured amount of light to register on the film.
7) THE LENS focuses the image onto the film, reversed and upside-down.

FILM CAMERA TYPES

Type of camera in reference to the film most commonly used:

Single lens reflex (SLR) small format: 35mm (36 x 24 mm)
Rangefinder small format
Medium format SLR
6x4.5cm, 6x6cm, 6x7cm, 6x9cm, 6x12cm
Twin lens reflex (TLR)
6cm x 6cm = 2 -1/4 x 2 -1/4 inch negative
View Camera or Field Camera
large format: 4 x 5 inch, 5 x 7 inch, 8 x 10 inch or larger negative

DIGITAL CAMERA TYPES

Digital single lens reflex (DSLR) or Mirrorless Camera Systems

CONVENTIONAL APS-C DSLR CAMERA: 24mm x 16mm
MIRRORLESS MICRO 4/3rds CAMERA: 17mm x 13mm
MIRRORLESS DIGITAL CAMERA: sensor size varies from 22mm x 15mm (APS-C format) and larger (the extremely small 8mm x 6mm size sensor is not suitable)

Professional digital cameras:
FULL FRAME DIGITAL CAMERA: same as 35mm negative film size: 36mm x 24mm
PROFESSIONAL DIGITAL CAMERA BACK: 44mm x 33mm and higher

The Single-Lens Reflex
Light coming through the lens is reflected up by the mirror to the viewing screen and through a five-sided prism, that turns the inverted image right-side up and around to the eye. When the picture is taken: the mirror snaps up to position; the shutter opens; and the light strikes the film at the back of the camera. Through-the-lens viewing produces the image virtually identical to the one produced on the film. The DSLR or digital single lens reflex camera is based upon the SLR camera.

Viewfinder or Rangefinder Camera
The light from the subject goes through the viewfinder to the eye and also to another lens onto the film. The difference between these two views is called the parallax error, and is more pronounced as objects are positioned closer to the camera. High quality viewfinder cameras automatically correct for parallax.

The Twin-Lens Reflex
Like the viewfinder camera, the twin-lens reflex has separate viewing and picture-taking systems. The lower lens conducts the light to the film. The upper one, coupled to the lower for focusing, conducts light in a mirror set at a 45 degree angle which reflects it up through the viewing screen. Like all mirror reflections, the image appears reversed left to right. A grid of hairlines is etched on the viewing screen to help compose the picture.

Medium Format System Camera
Similar to the 35mm single-lens reflex, the medium format system camera utilizes a mirror to reflect the image back to the viewing screen. These cameras are comprised of detachable components, such as the camera body, digital back, film back or magazine, viewfinder prism with light meter, and lens, permitting greater flexibility in the studio or field.

The View Camera or Large Format Camera

The light comes directly from the subject, through the lens, and falls on a viewing screen at the back of the camera. Because the image that the photographer sees comes directly from the lens, the image appears upside-down and reversed. The viewing screen, used as an aid in composing pictures, is a glass plate etched with a grid of hairlines.