



Exposure Triangle

From Auto to Manual



HELLO

My name is Mu Tah Buk. I love photography and share the passion by giving free presentations.

You can find me @mutahbuk

“There is one thing the
photograph must contain, the
humanity of the moment.”

— Robert Frank

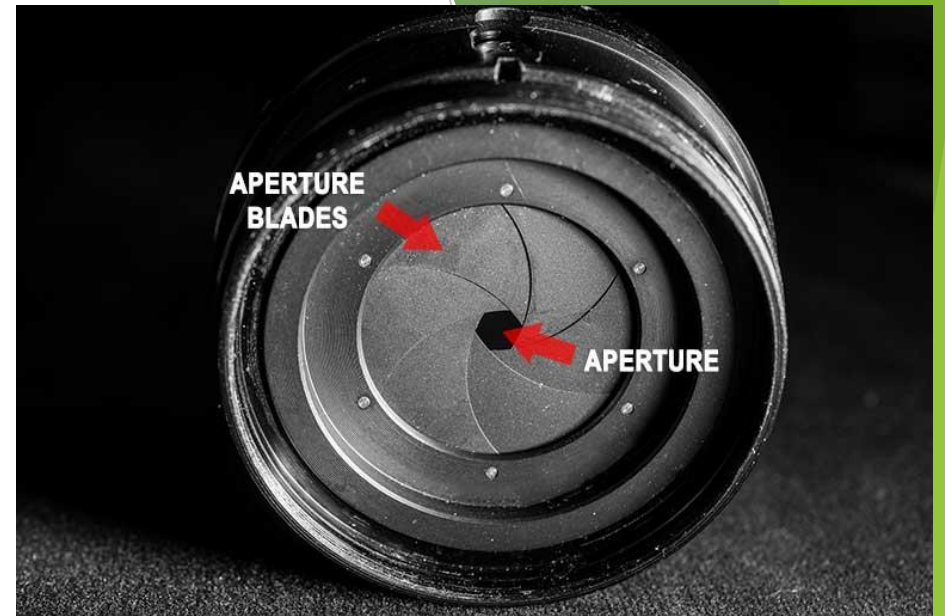
WHAT IS EXPOSURE?

- When the camera sensor is exposed to light to take a photo, an exposure is made.
- Under-expose happens when the camera does not get enough light.
- Over-expose happens when the camera gets too much light.
- We usually aim for just right.
- The exposure is controlled by 3 factors – Aperture, shutter speed and ISO film speed.



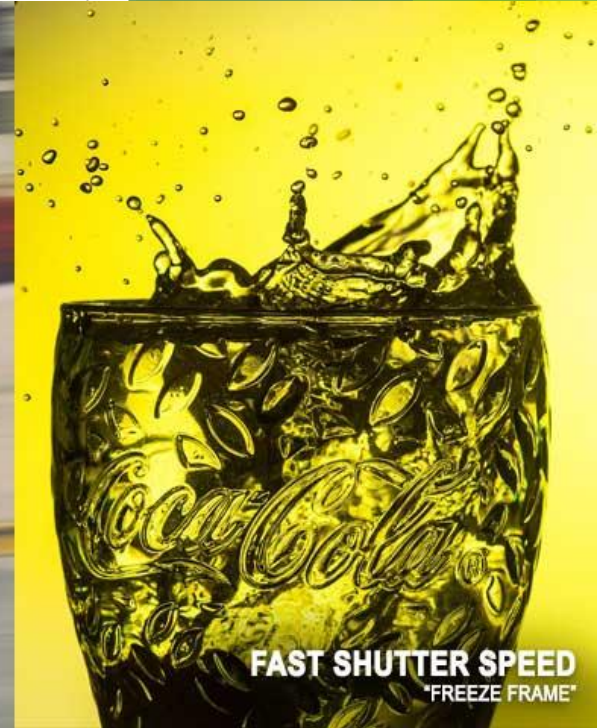
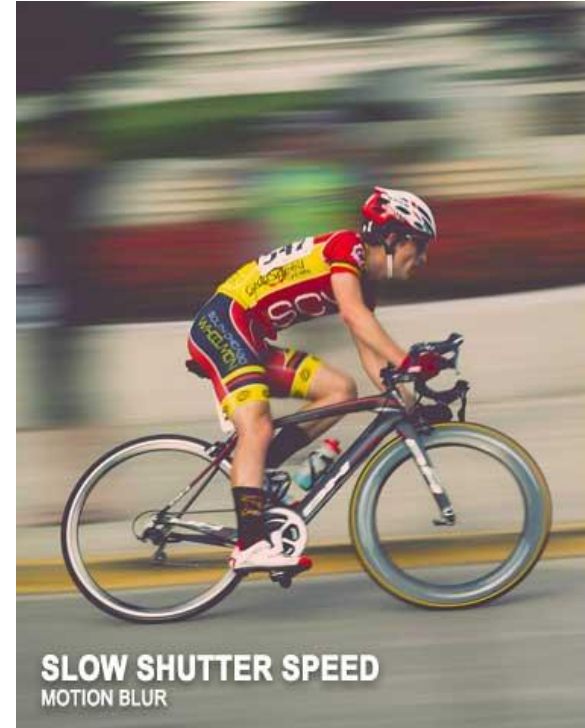
APERTURE

- Aperture is simply a hole in the lens that allows light to enter the camera.
- A set of aperture blades will control the amount of light.
- As the aperture closes up: Less light into the camera, photo with a deep depth of field – Meaning everything is in focus, from front to back.
- As the aperture opens up: More light into the camera, photo with a shallow depth of field – The foreground in focus but background blurred, or vice-versa.
- Smaller f-number, wider open the “gates” are. Bigger f-number, the narrower the “gates” are.



SHUTTER SPEED

- Shutter speed is simply “how long to expose the camera to light”.
- A slow shutter speed usually ends up with motion blur or camera shake.
- A fast shutter speed will “freeze frame”. Good for capturing those water droplets in mid-air and stuff.



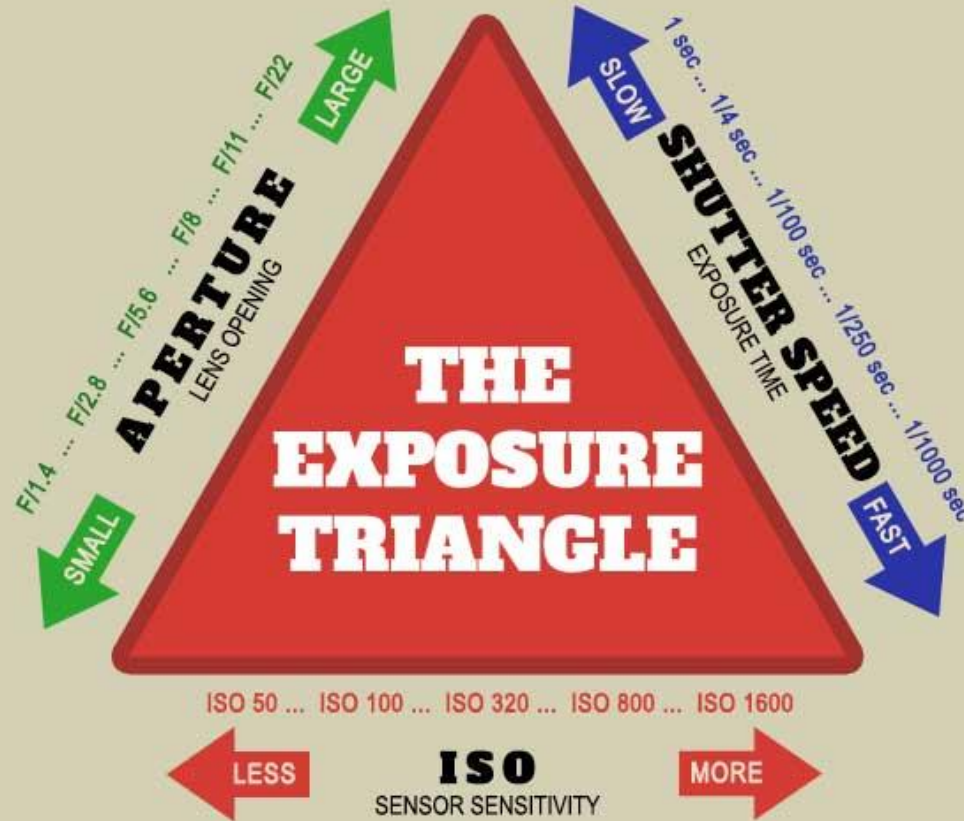
ISO FILM SPEED

- In the past, we use film to capture photos.
- Each roll of film is rated by an ISO number as according to how sensitive it is to light.
- The bigger the ISO number, the more sensitive it is to light. (ISO 1600 is more sensitive than ISO 400)
- We do not use film anymore, but ISO film speed is still used.
- But with electronic sensors, the higher the ISO, the more electronic noise it picks up.



THE BALANCE

- The exposure triangle is all about balancing the 3 elements – Aperture, shutter speed and ISO film speed to achieve the photo that you want.



SHUTTER SPEED

1 sec ... 1/4 sec ... 1/250 sec ... 1/1000 sec

SLOW



MOTION BLUR

FAST



FREEZE FRAME

APERTURE

F/1.4 ... F/5.6 ... F/8 ... F/11 ... F/22

LARGE



MORE LIGHT
LESS DEPTH OF FIELD
BLUR BACKGROUND

SMALL



LESS LIGHT
MORE DEPTH OF FIELD
DETAILED BACKGROUND

ISO

ISO 100 ... ISO 320 ... ISO 800 ... ISO 1600

LESS



LESS SENSITIVE TO LIGHT
LESS NOISE

MORE



MORE SENSITIVE TO LIGHT
MORE NOISE

JUST RIGHT NOT ALWAYS RIGHT

- While we usually seek to achieve a well balanced exposure, it is not always the best.
- There are times when we underexpose or overexpose to achieve certain creative effects.
- One such example is silhouette photography, where we deliberately underexpose photos.



THANK YOU

For the full guide, please visit –

<https://xlightphotography.com/exposure-triangle-photography/>