BASIC PHOTOGRAPHY

DCC AND PPC COMBINED TRAINING

2025

WHAT DID WE TALK ABOUT?

"Would you tell me please, which way I ought to go from here?"

"That depends a good deal on where you want to get to."

"I don't care much where-"

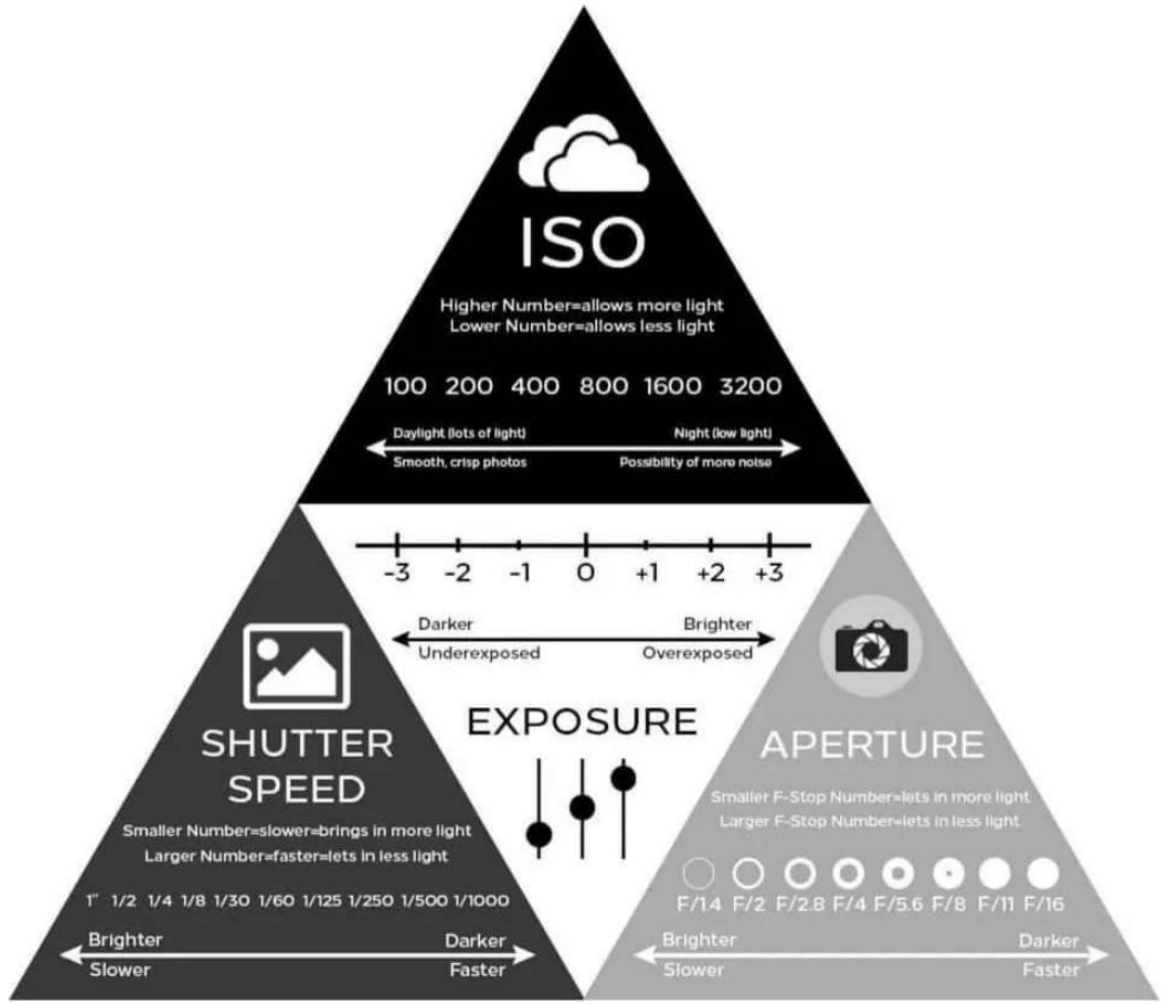
"Then it doesn't matter which way you go."

-Lewis Carrol

WHAT DID WE TALK ABOUT?

1. LEARNING TO PHOTOGRAPH WITH INTENTION
2. NEEDING TO KNOW HOW TO OPERATE YOUR CAMERA
3. WHAT EXPOSURE IS
    1. SHUTTER SPEED
    2. APERTURE
    3. ISO

THE EXPOSURE TRIANGLE



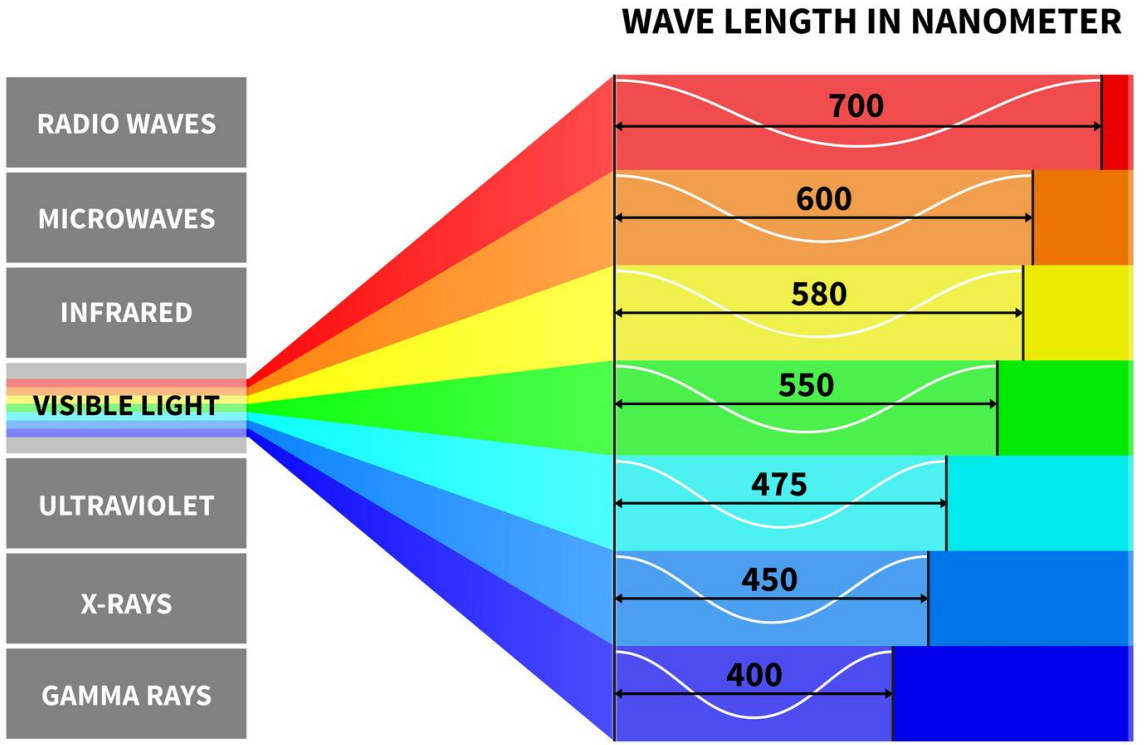
QUESTIONS?

BASIC PHOTOGRAPHY: CAPTURE PART 2

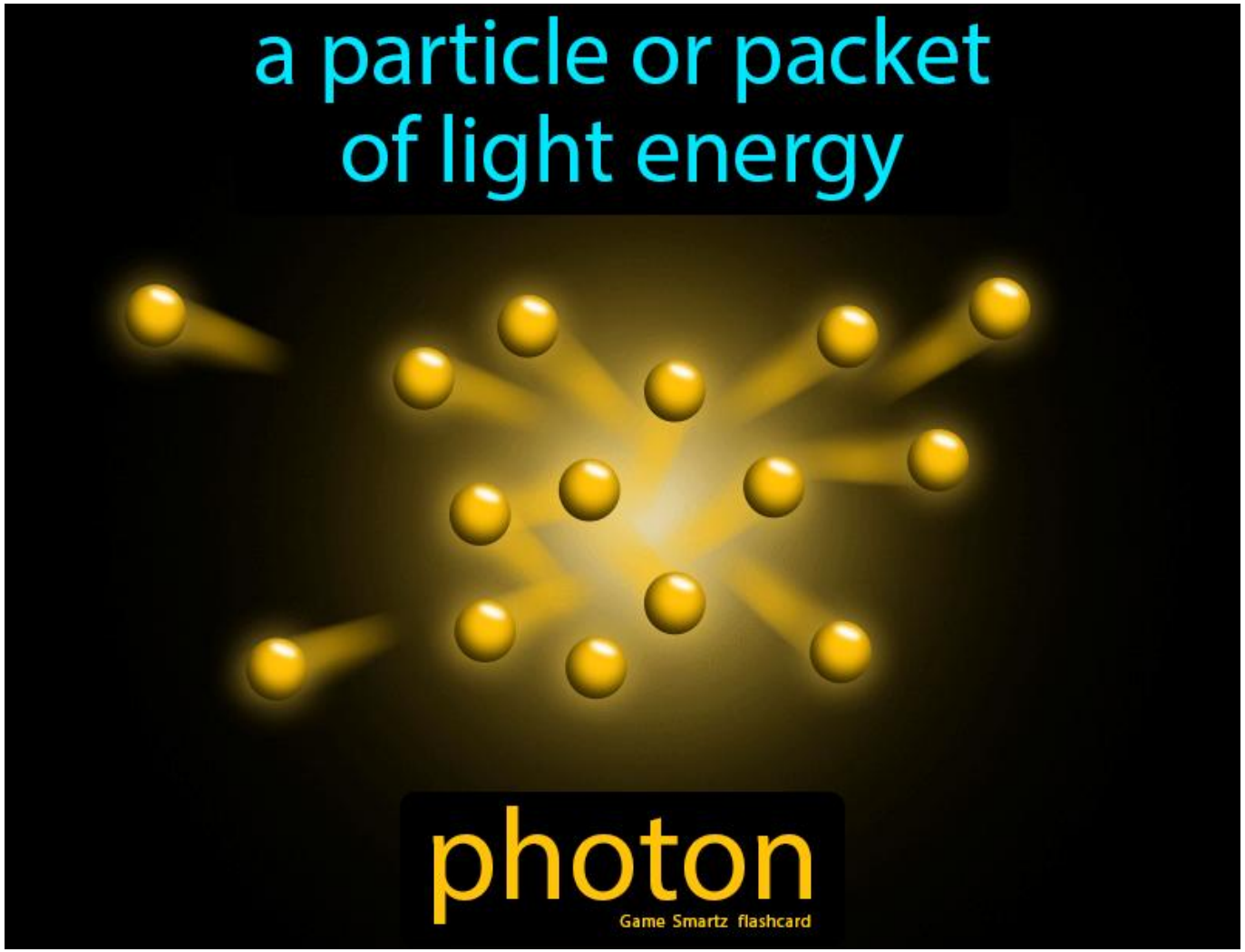
Shutter Speed
Aperture
ISO
Metering
Exposure Compensation
Camera Modes
Shooting Scenarios
Jpeg or RAW
How to Take Sharp Photos
Focusing
Technique

METERING

RECALL, LIGHT BEHAVES AS A WAVEFORM AND A PARTICLE



METERING

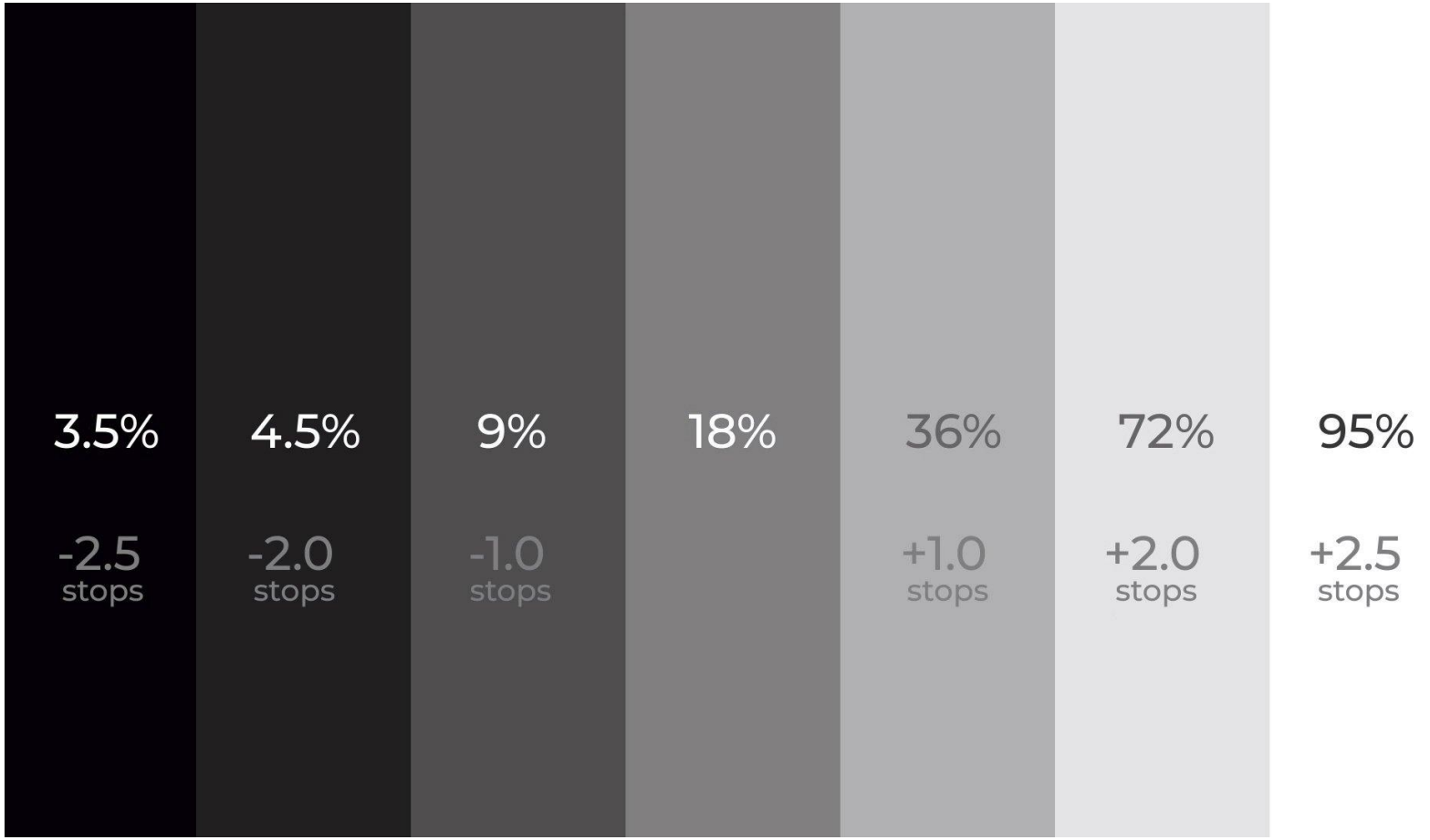


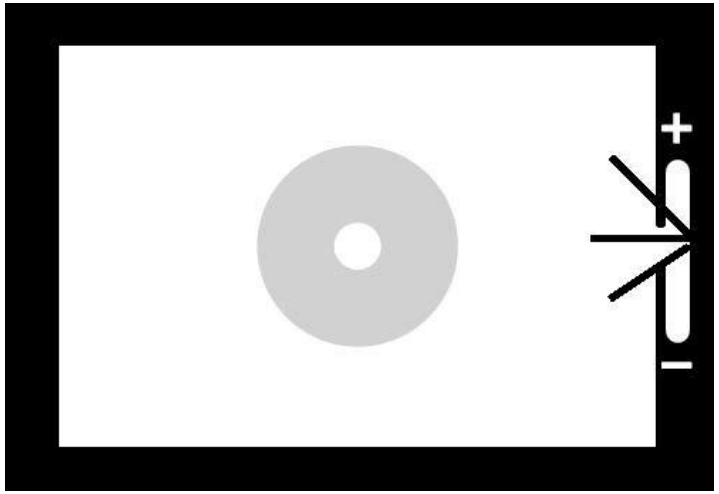
THE NUMBER OF PHOTONS THAT ARE DETECTED BY THE CAMERA SENSOR DETERMINES THE EXPOSURE.

THERE IS NO SUCH THING AS A "PERFECT EXPOSURE"!

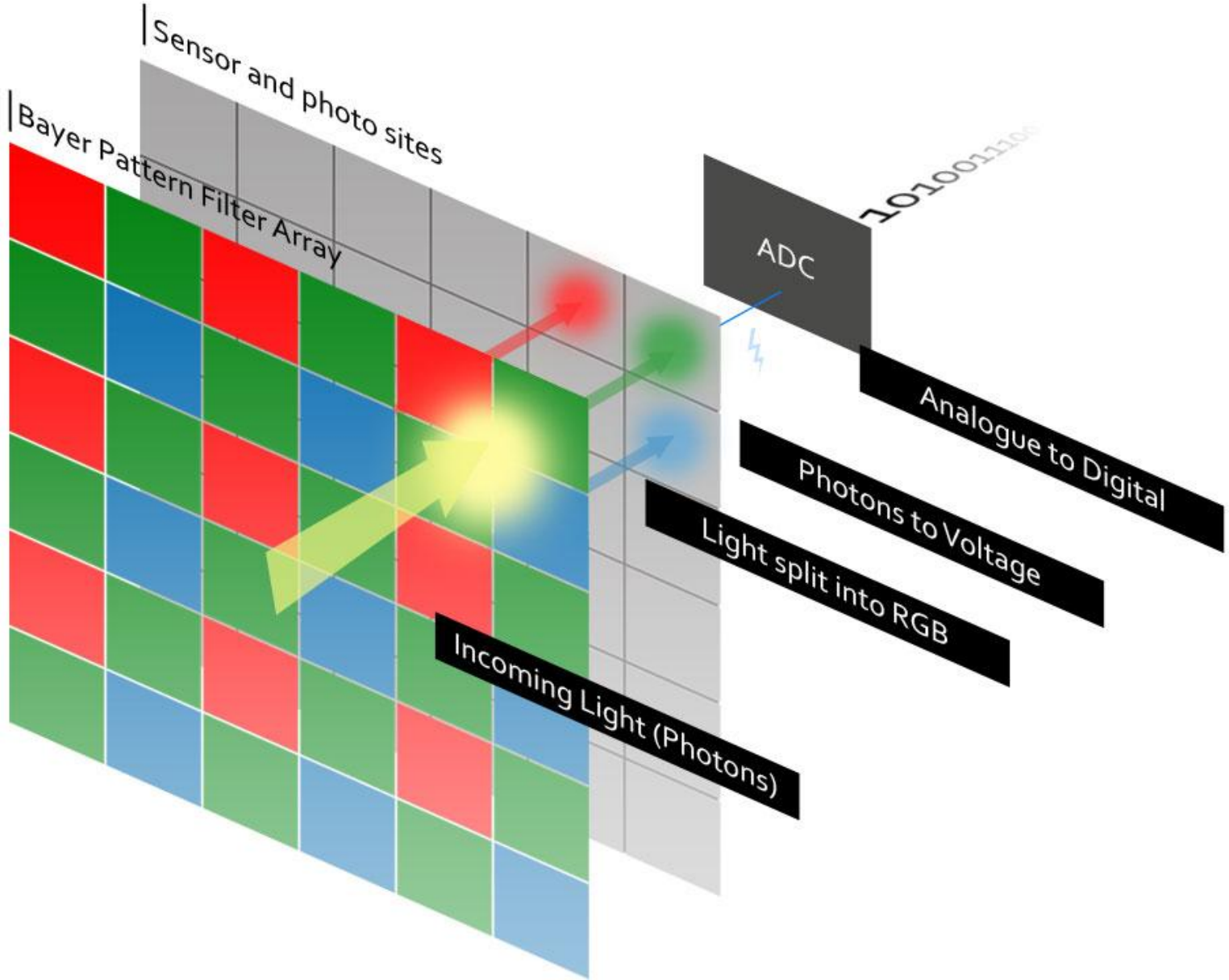
METERING

METERING


3.5%
-2.5 stops
4.5%
-2.0 stops
9%
-1.0 stops
18%
36%
+1.0 stops
72%
+2.0 stops
95%
+2.5 stops


+
-

Camera Imaging Sensor with Bayer Filter



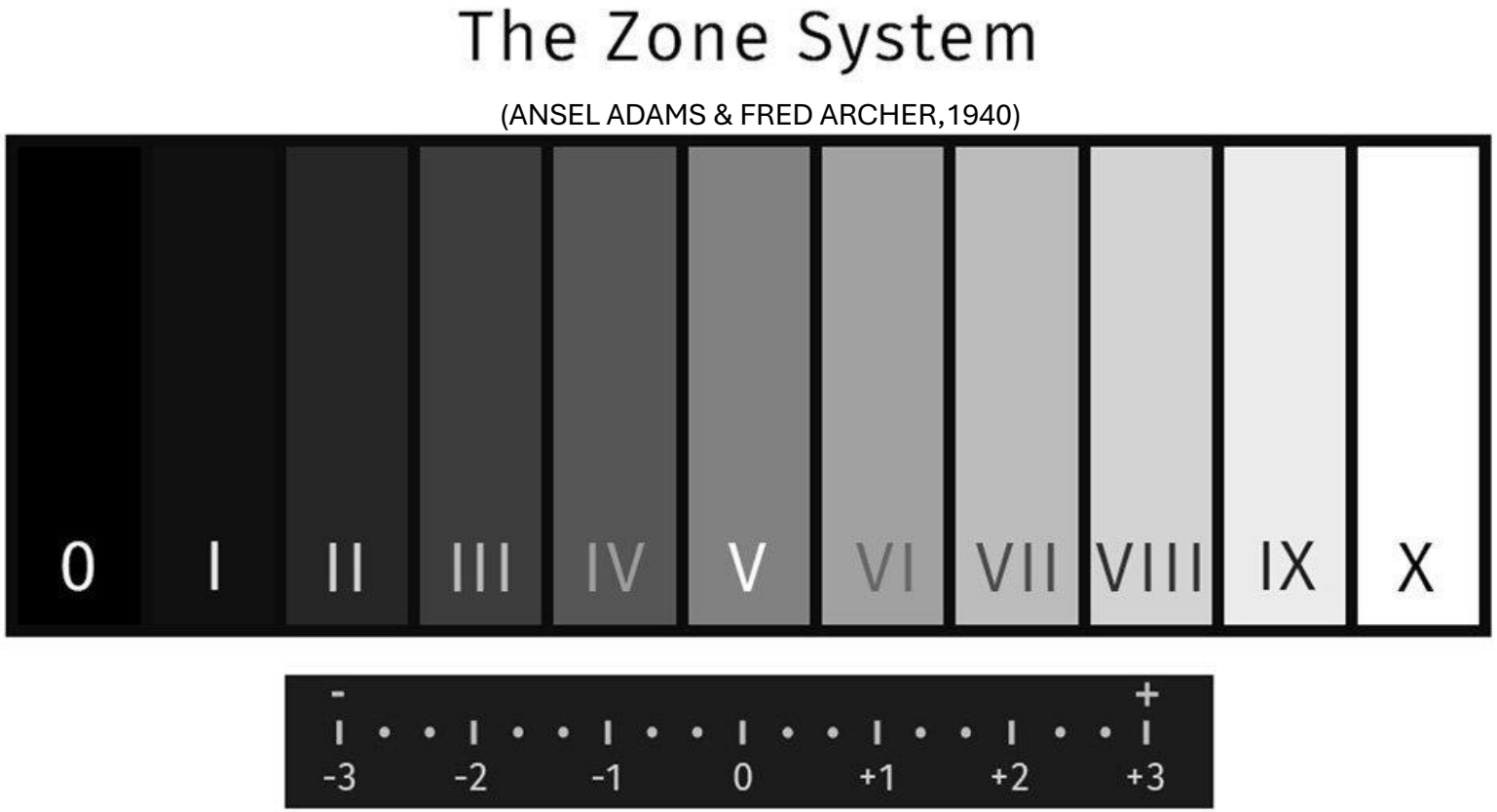
HOMEWORK

- SET YOUR CAMERA TO RECORD MONOCHROME JPEG FILES
- MAKE A SERIES OF PHOTOGRAPHS OF A WHITE SURFACE (TYPE PAPER OR WALL) USING MANULE MODE.
  - “CORRECT”
  - 1 & 2 STOPS OVER
  - 1 & 2 STOPS UNDER
  - (For extra credit, repeat with black paper)

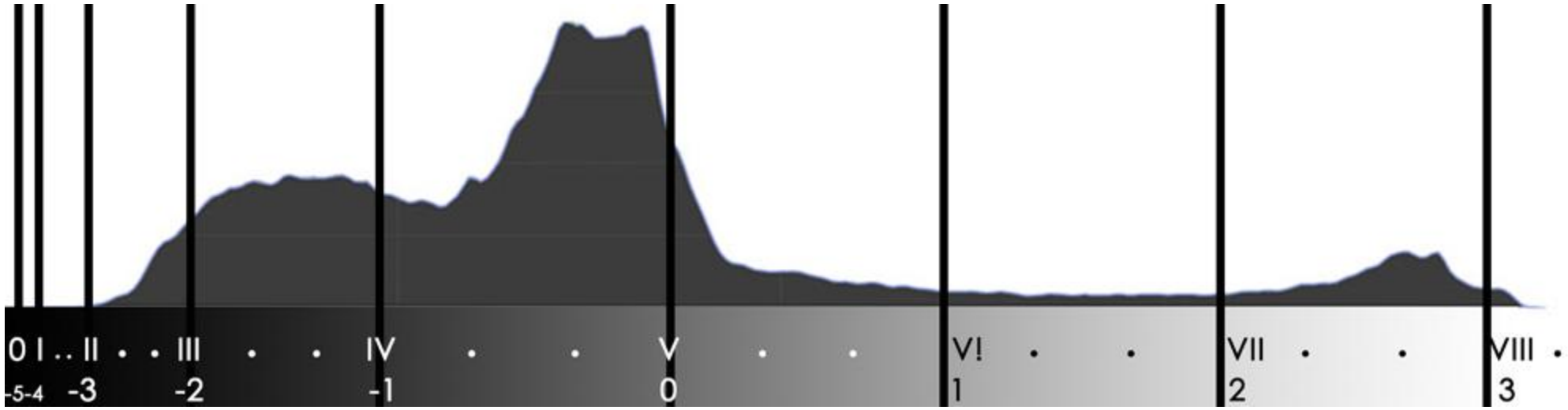
- DO NOT FORGET TO RESET CAMERA!

THE HISTOGRAM

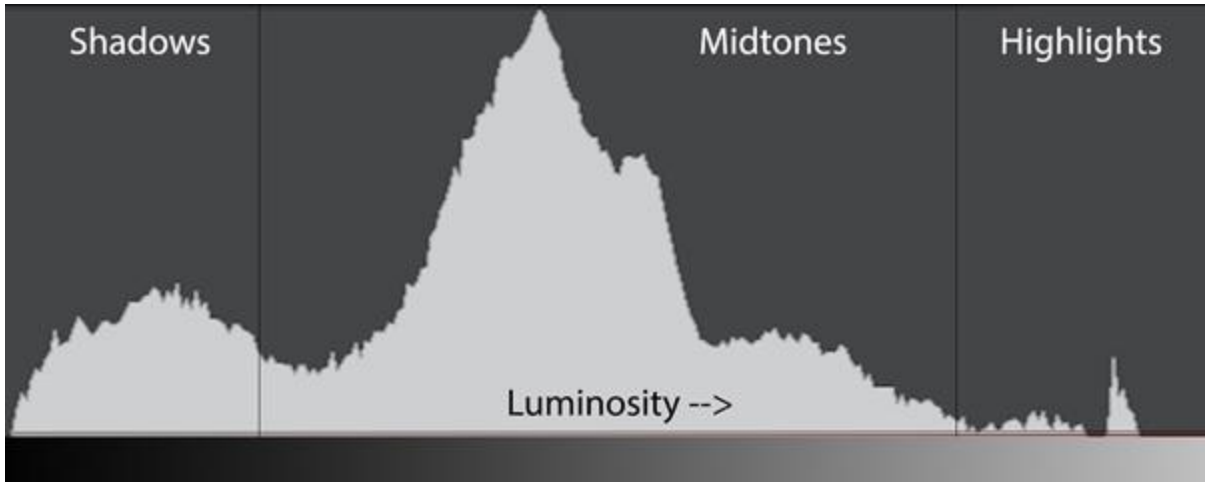
DYNAMIC RANGE

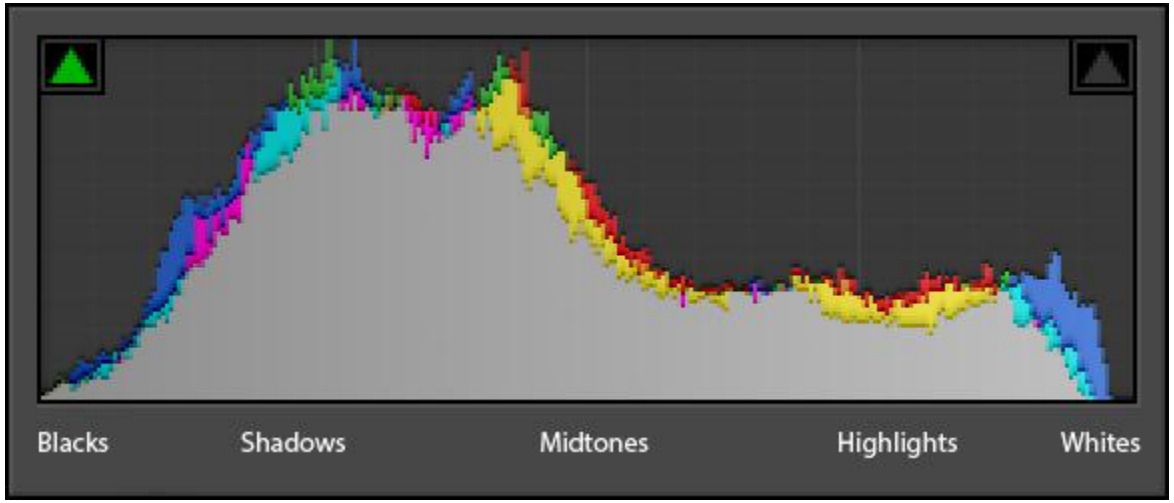


THE HISTOGRAM

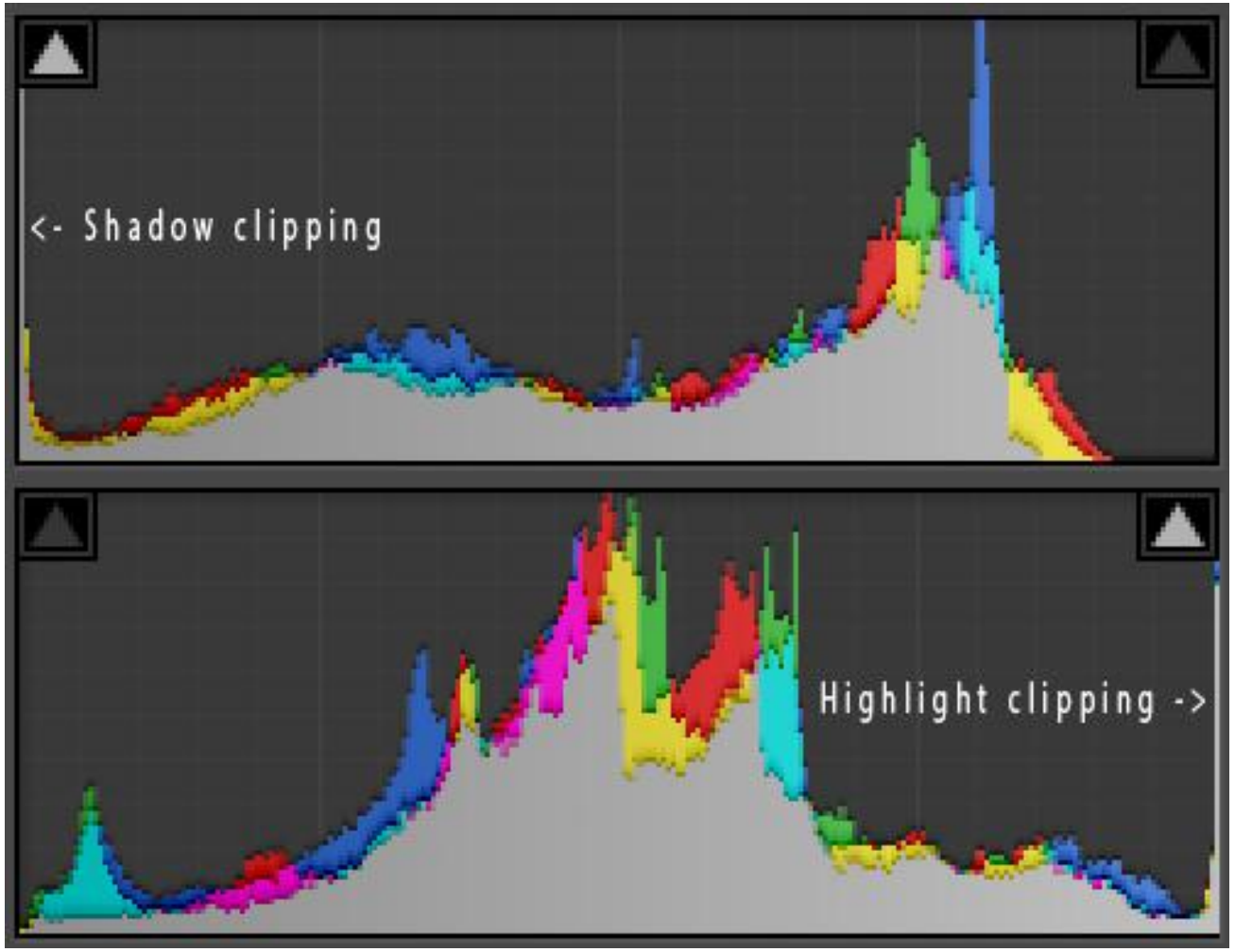


HISTOGRAMS


Shadows
Midtones
Highlights
Luminosity -->


Blacks
Shadows
Midtones
Highlights
Whites

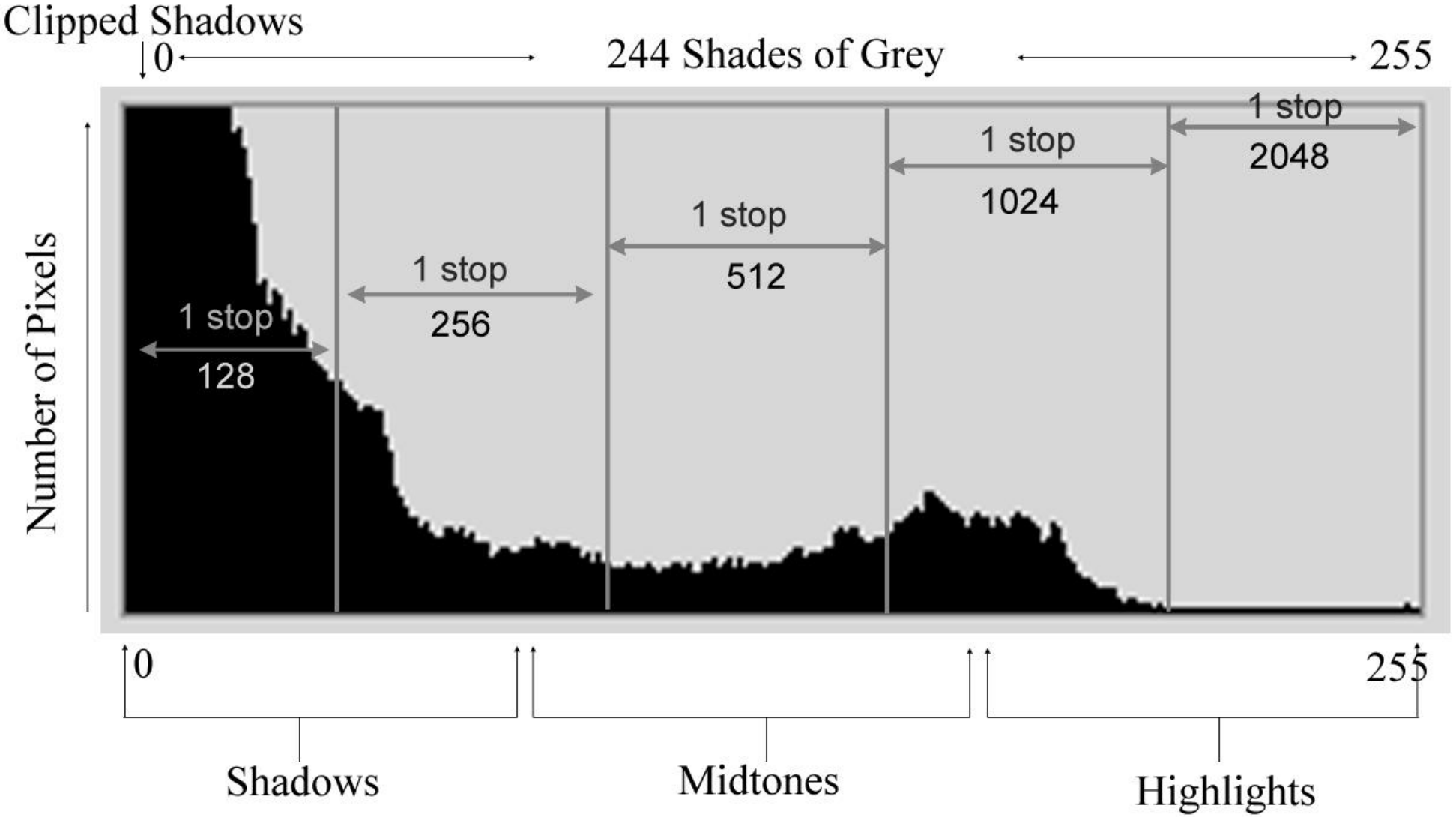
HISTOGRAMS



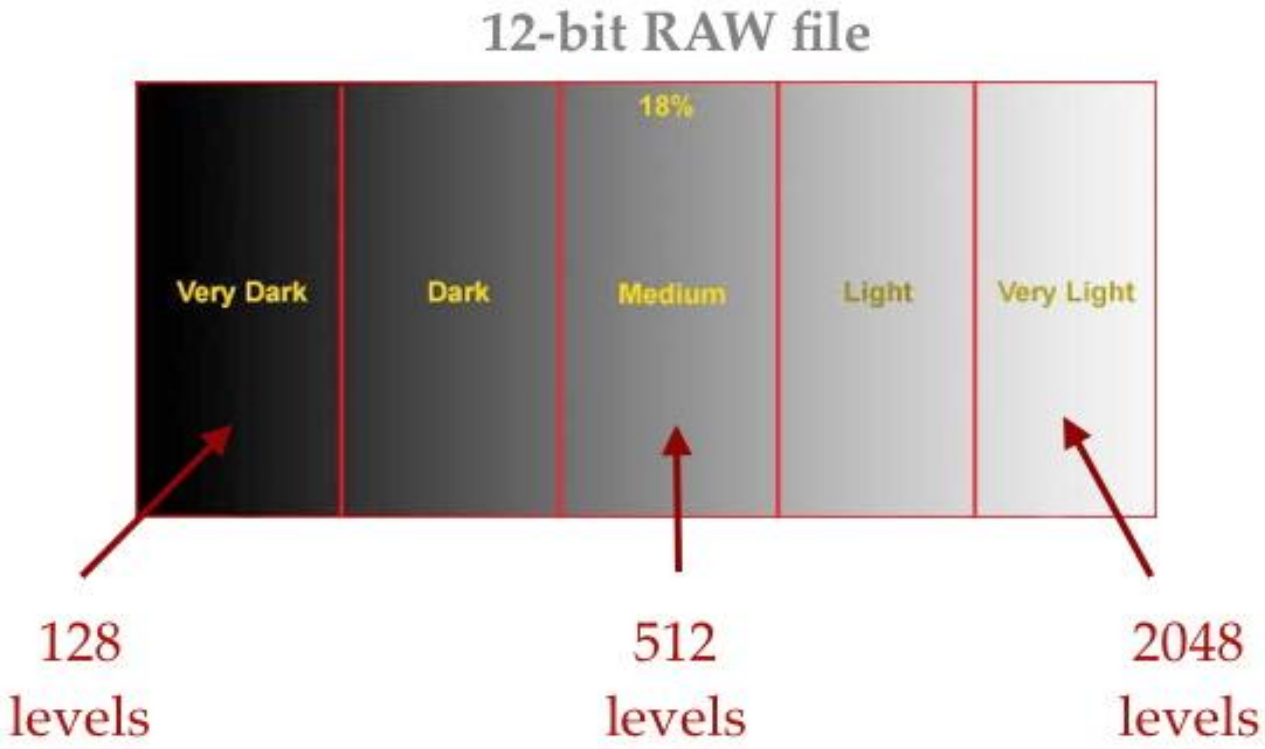
HISTOGRAMS

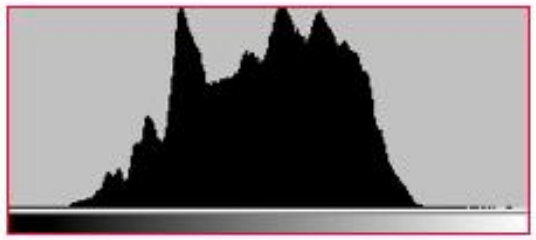
“All digital camera sensors capture light in a linear fashion, starting from black to white (left to right on the histogram). This means they capture fewer levels of information in the shadows, and the maximum number of levels in the highlights, just before clipping. In other words, the sensor is much more sensitive to brighter levels of light that darker ones.” Robert Rodriguez, Jr.

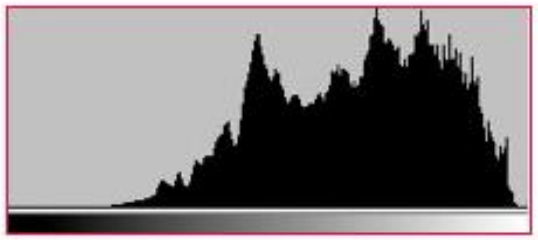
HISTOGRAMS


Clipped Shadows
0
244 Shades of Grey
255
Number of Pixels
1 stop
128
1 stop
256
1 stop
512
1 stop
1024
1 stop
2048
0
255
Shadows
Midtones
Highlights

HISTOGRAMS


12-bit RAW file
18%
Very Dark
Dark
Medium
Light
Very Light
128 levels
512 levels
2048 levels



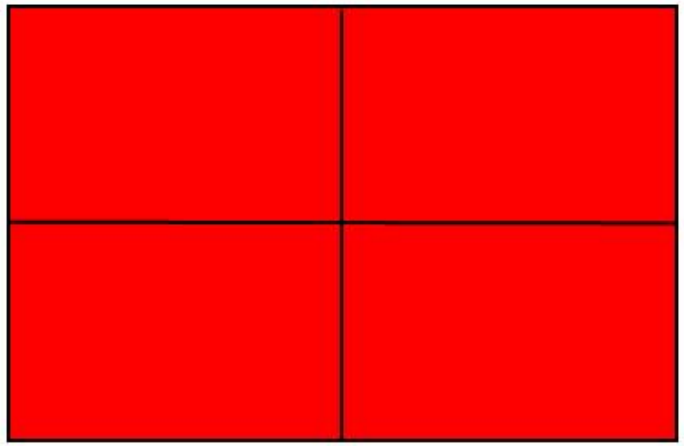


HISTOGRAMS

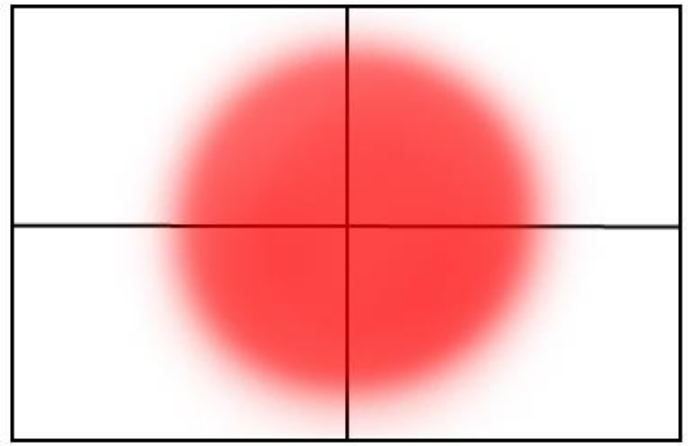
“This is the main reason why we see digital noise in the shadows and not the highlights. The “signal to noise” ratio is much higher in the highlights, therefore noise can only rear its ugly head in the shadows where this ratio is much lower.”

Robert Rodriguez, Jr.

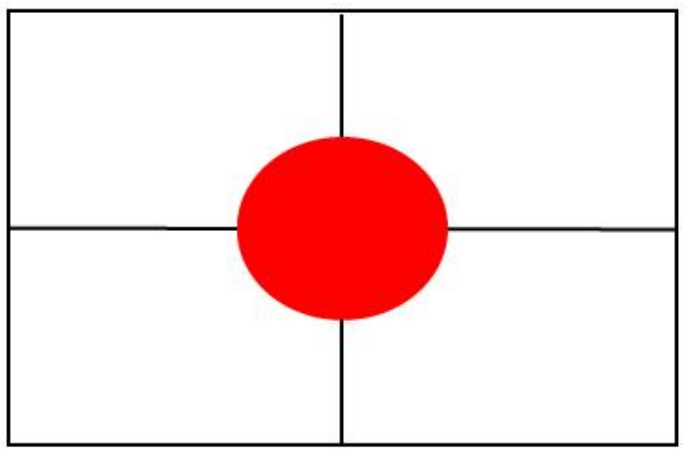
Light Metering Modes



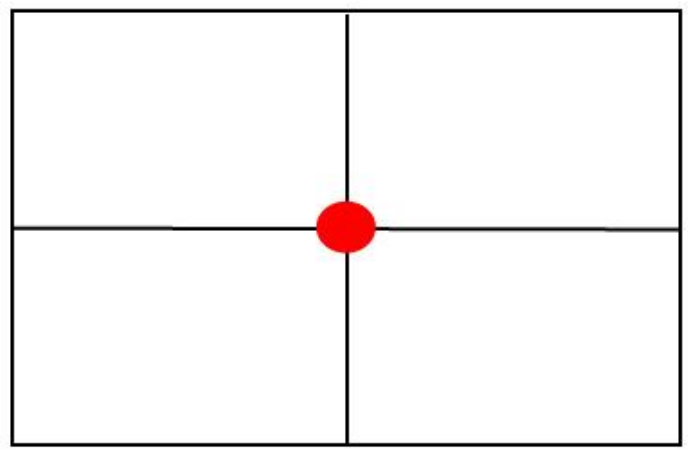
Evaluative/Matrix



Center-weighted

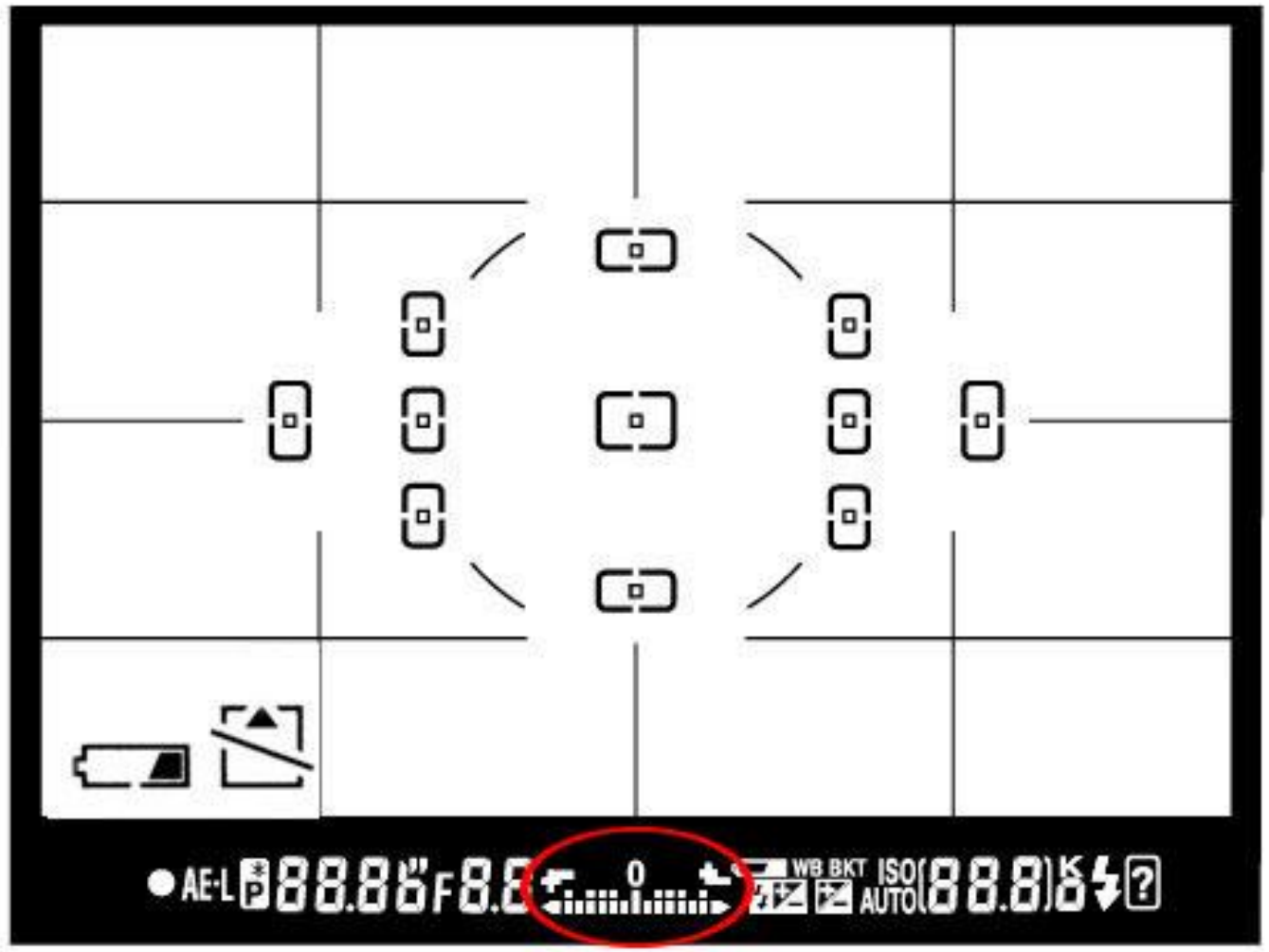


Partial

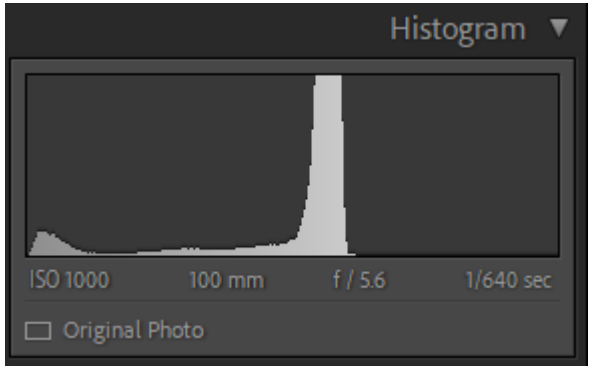


Spot

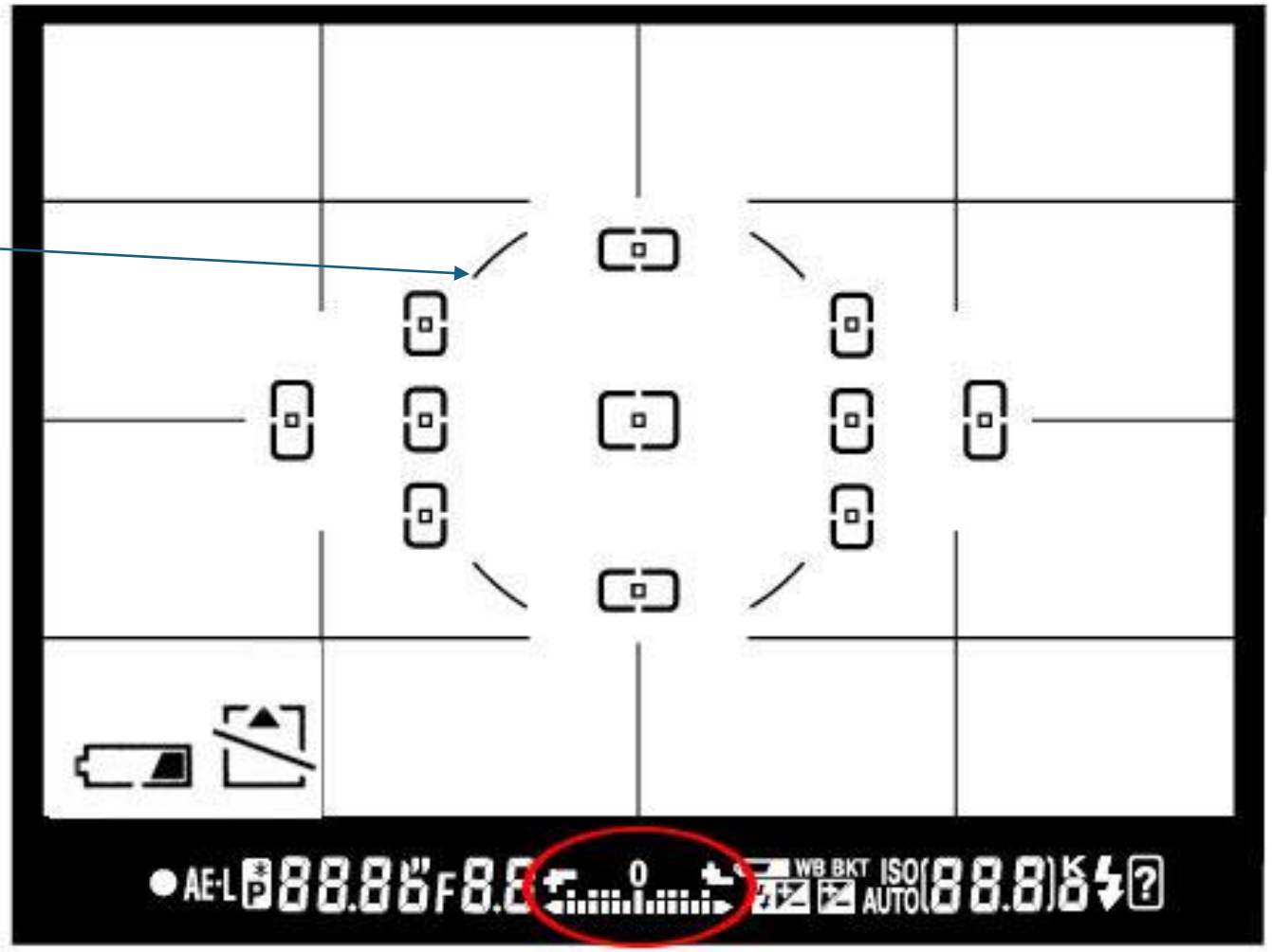
EVALUATIVE



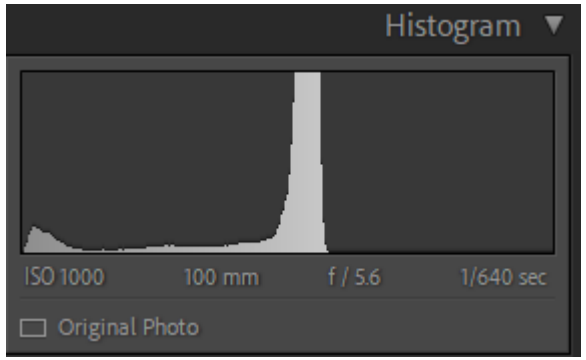
EVALUATIVE (ESP)

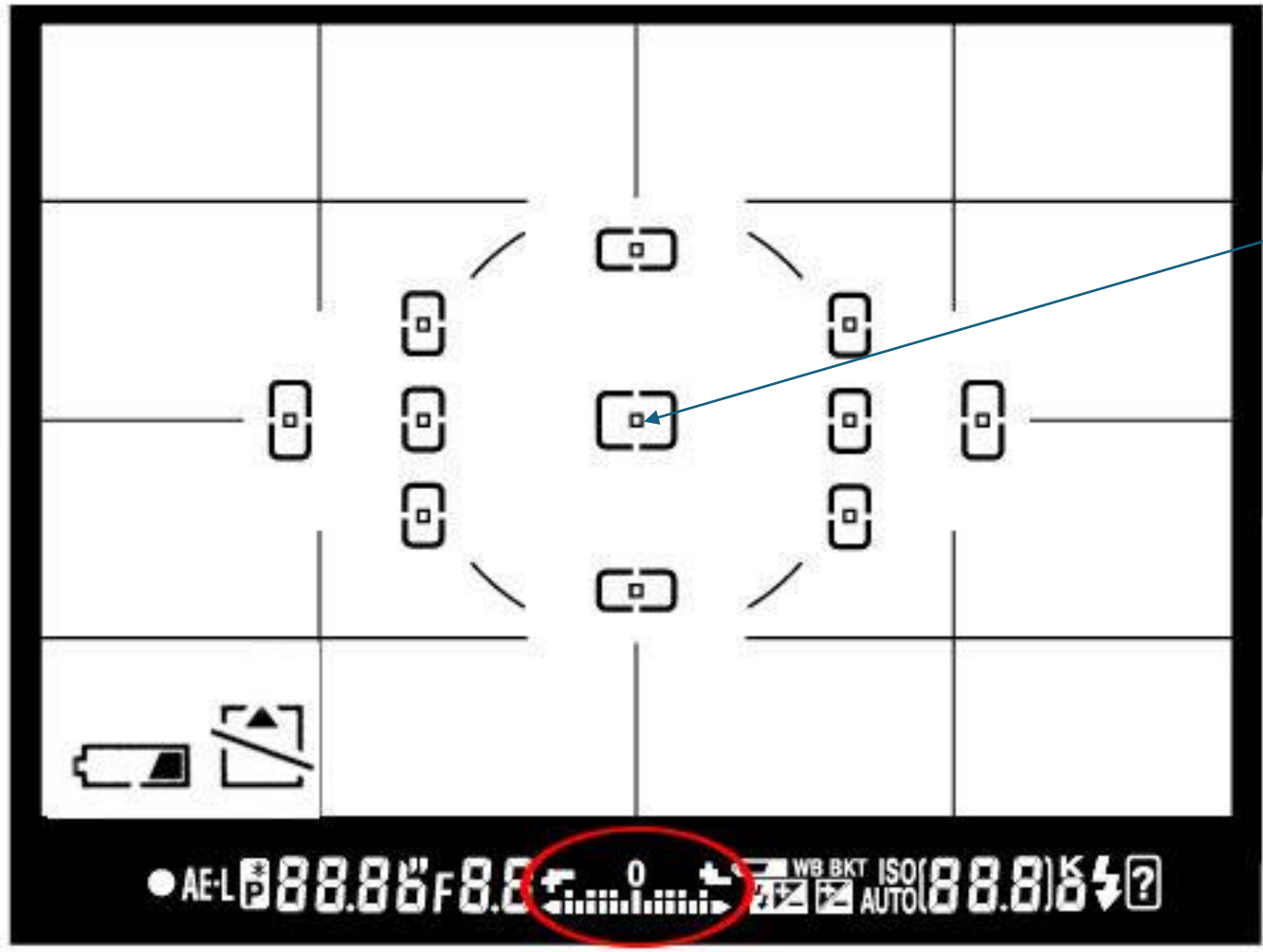


CENTER
WEIGHTED

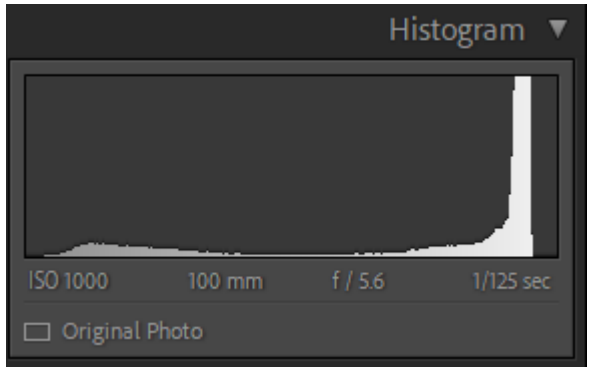


CENTER WEIGHTED



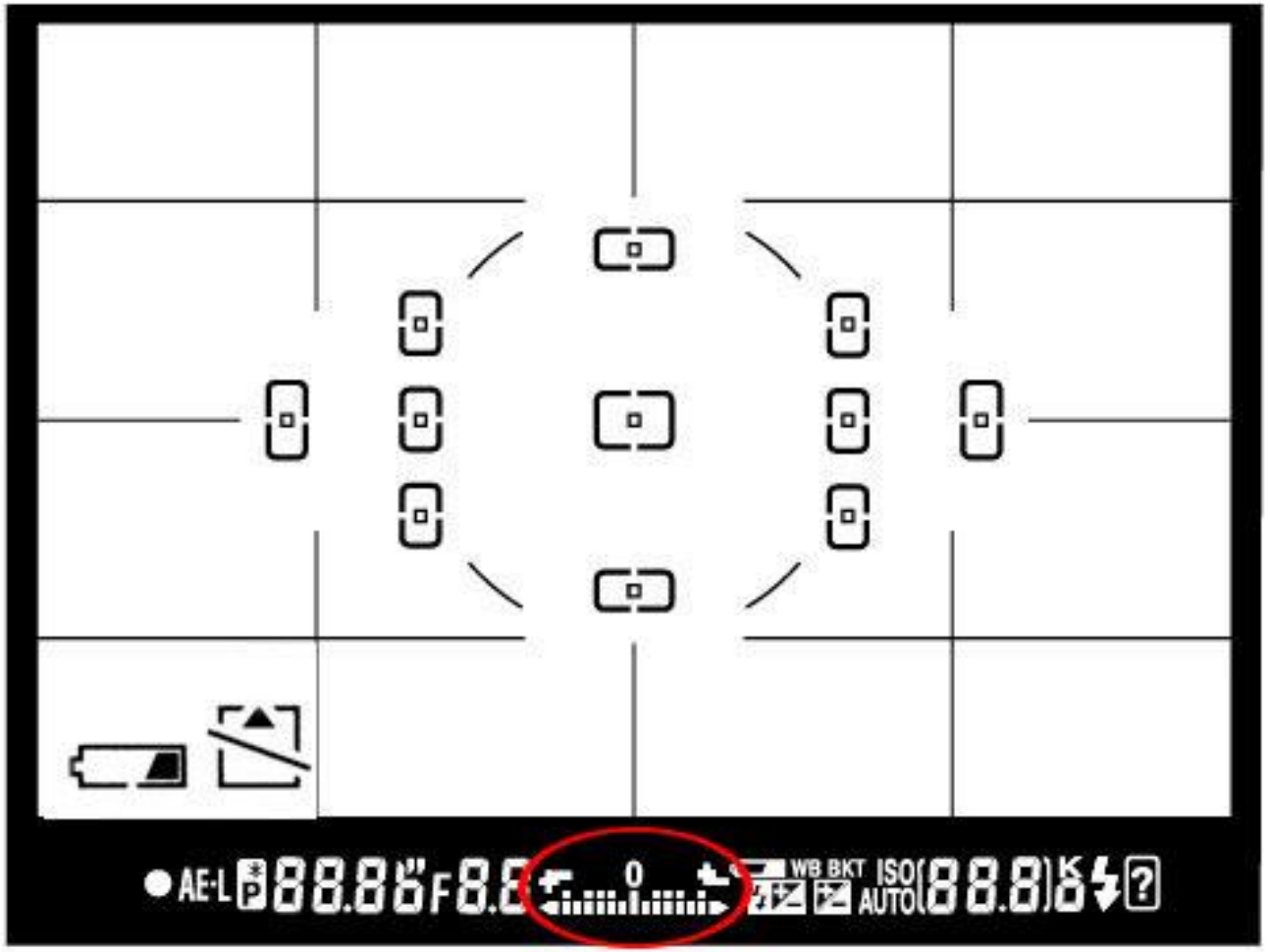

SPOT
AE-L
WB BKT
ISO
AUTO

SPOT



EXPOSURE COMPENSATION

“Exposure Compensation allows photographers to override exposure settings picked by camera’s light meter, in order to darken or brighten images before they are captured.” (photographylife article)



EXPOSURE COMPENSATION: WHAT I DO AND WHY

- MOST OF THE TIME I USE PATTERN (MATRIX, EVALUATIVE) METERING.
- I GERNERALLY SHOOT IN APERTURE OR SHUTTER PRIORITY.
- I HAVE OVER AND UNDER EXPOSURE WARNINGS TURNED ON.
- I HAVE THE HISTOGRAM IN MY VIEWFINDER.
- I USE THE FRONT WHEEL TO EITHER BRIGHTEN OR DARKEN THE SCENE.
- USUALLY, I WILL PUSH THE EXPOSURE TO THE RIGHT.
- ***I NEVER RELY ON THE LCD TO EVALUATE THE EXPOSURE!***

CAMERA METERED EXPOSURE (SHUTTER PRIORITY)				
f/1.4	f/2.0	f/2.8	f/4.0	f/5.6
1/1000	1/500	1/250	1/125	1/60

SHUTTER PRIORITY, -1 EV* EXPOSURE COMPENSATION				
f/1.4	f/2.0	f/2.8	f/4.0	f/5.6
1/1000	1/500	1/250	1/125	1/60

SHUTTER PRIORITY, +1 EV EXPOSURE COMPENSATION				
f/1.4	f/2.0	f/2.8	f/4.0	f/5.6
1/1000	1/500	1/250	1/125	1/60

* "EV" = Exposure Value

https://photographylife.com/exposure-value

CAMERA METERED EXPOSURE (APERTURE PRIORITY)				
f/1.4	f/2.0	f/2.8	f/4.0	f/5.6
1/1000	1/500	1/250	1/125	1/60

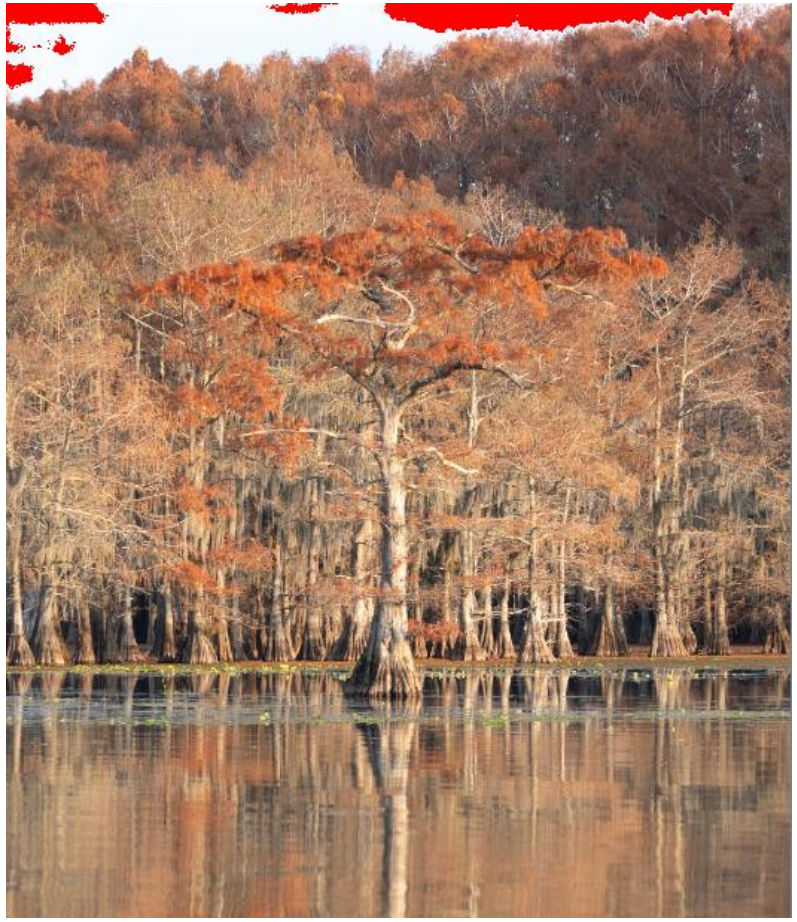
APERTURE PRIORITY, -1 EV EXPOSURE COMPENSATION				
f/1.4	f/2.0	f/2.8	f/4.0	f/5.6
1/1000	1/500	1/250	1/125	1/60

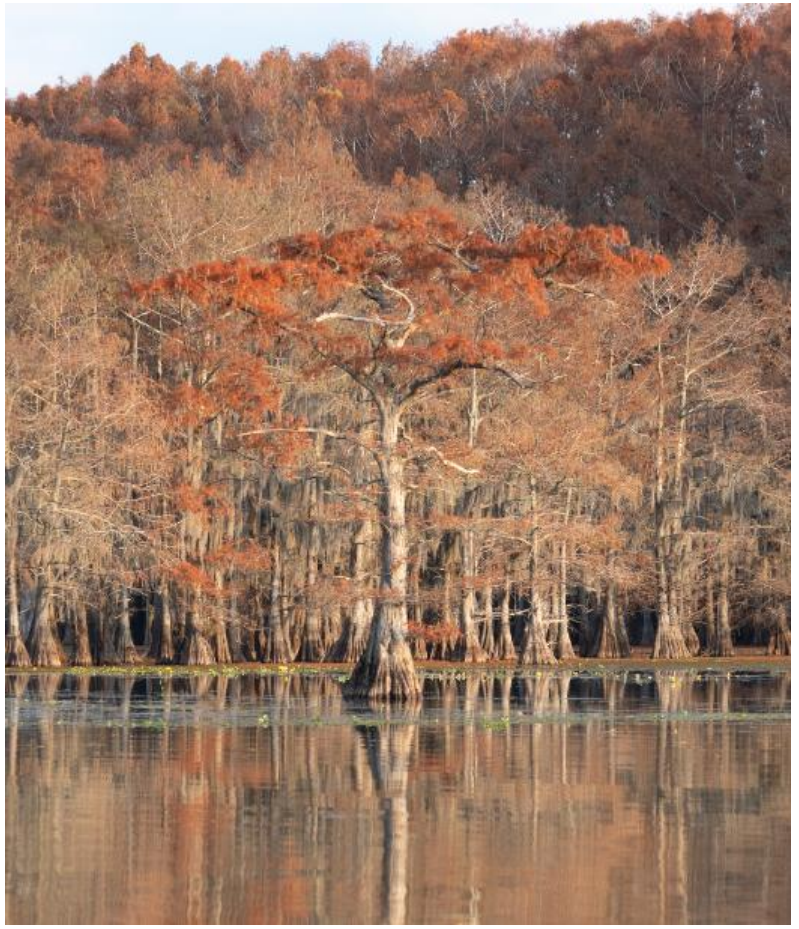
APERTURE PRIORITY, +1 EV EXPOSURE COMPENSATION				
f/1.4	f/2.0	f/2.8	f/4.0	f/5.6
1/1000	1/500	1/250	1/125	1/60

https://photographylife.com/exposure-value

BLINKIES (EXPOSURE WARNINGS)

BLINKIES (EXPOSURE WARNINGS)





BLINKIES

BLINKIES

EXPOSE TO THE RIGHT (ETTR)

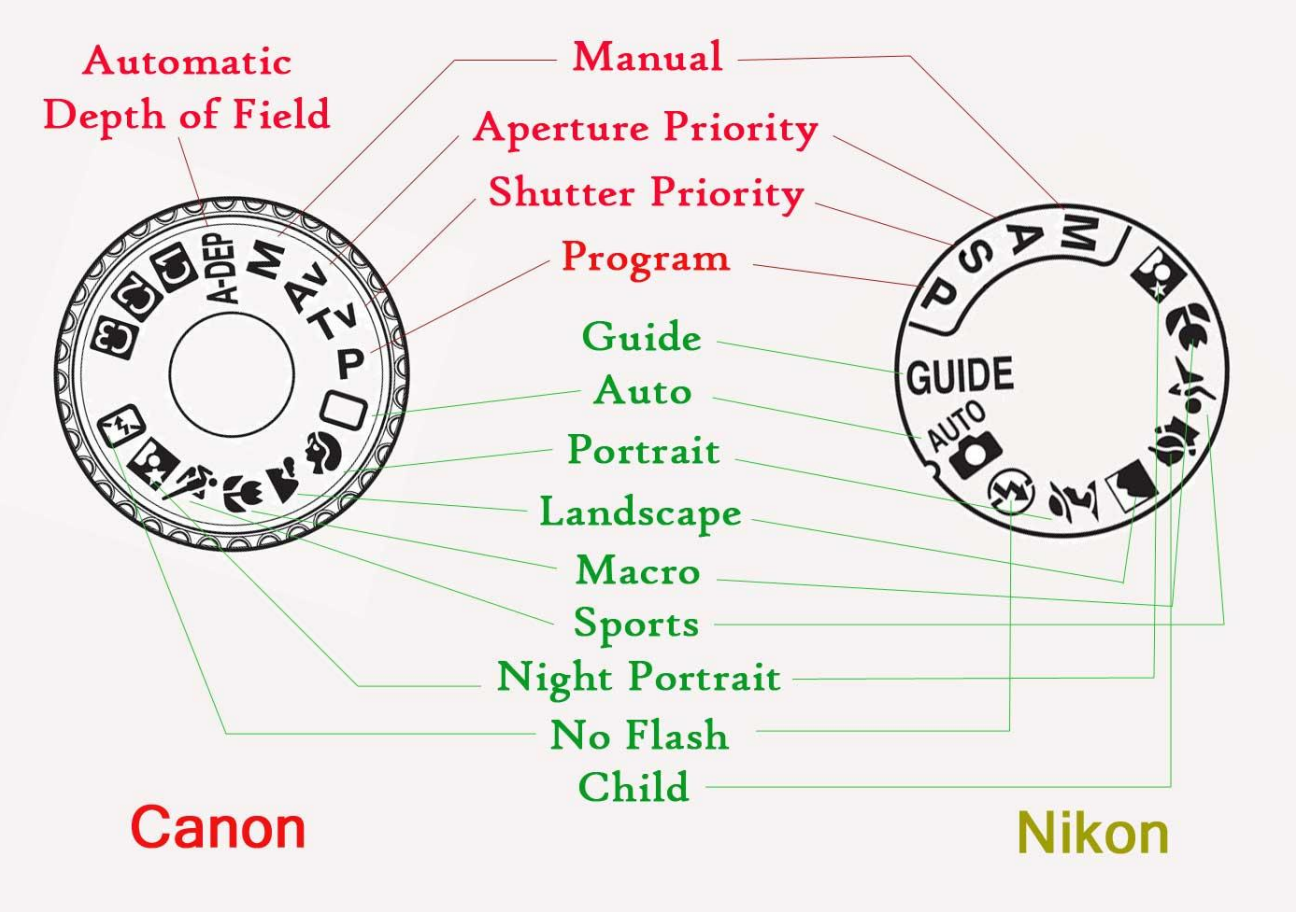
The basis of ETTR is simple: optimize your exposure, and get the highest-quality image possible. Most people expose a scene so that the image looks how they want — and, at face value, this makes sense. Optimum exposure is different, though. Instead of exposing the scene "correctly", it is better to expose a scene to be as bright as possible, without blowing out the scene's highlights and losing all of that data. Then, in post-processing, you darken the image so that it looks how you want. (Spencer Cox, Exposing to the Right Explained (photographylife.com))

EXPOSE TO THE RIGHT (ETTR)

By darkening an exposure in post-processing, you are effectively using a lower-than-base ISO. It brings similar benefits, too — a decrease in image noise, richer colors, and a greater dynamic range. Images exposed using ETTR are more malleable in post-processing, making it easier to produce the photo you have in your mind's eye.

(Spencer Cox, Exposing to the Right Explained (photographylife.com))

CAMERA MODES and SHOOTING MODES



HOMEWORK

The purpose of this exercises is to gain a better understanding of exposure compensation and "Expose to the Right" (ETTR). You may need to access your camera's instruction manual or find a YouTube video to help you enable the over and under exposure warnings.

1. **Compare and contrast photographs of the same scene taken at an exposure set by your camera to exposures above and below the camera settings.**

2. **Take a shot using any metering mode you wish and then repeat it as an under exposure and again using ETTR. Process the over and under exposure files to look like the exposure your camera suggested and compare the image quality of the three images.**

(Extra credit: watch Dennis' training video from his March 13th Master Class on Caddo Sunrise.)

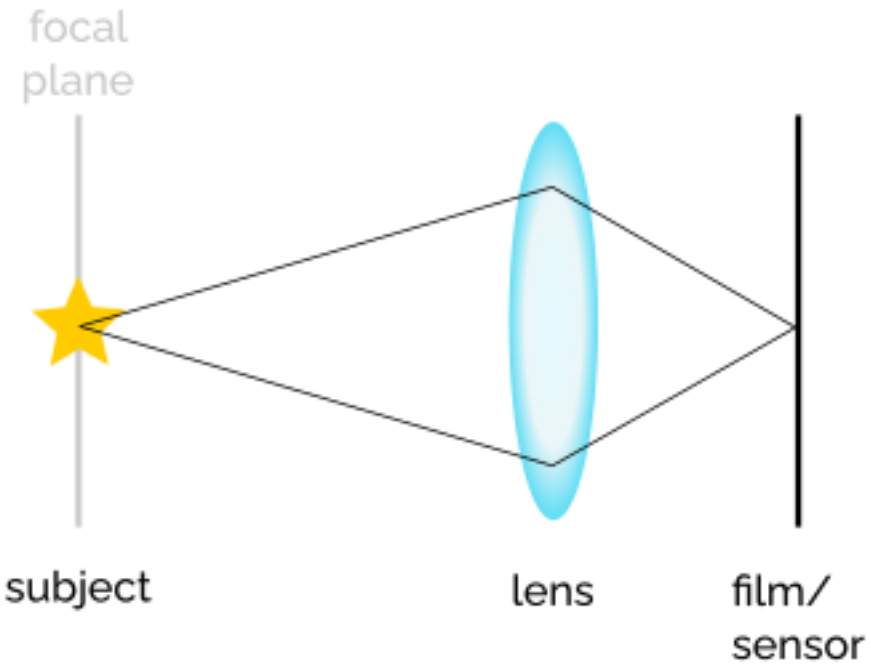
JPEG or RAW

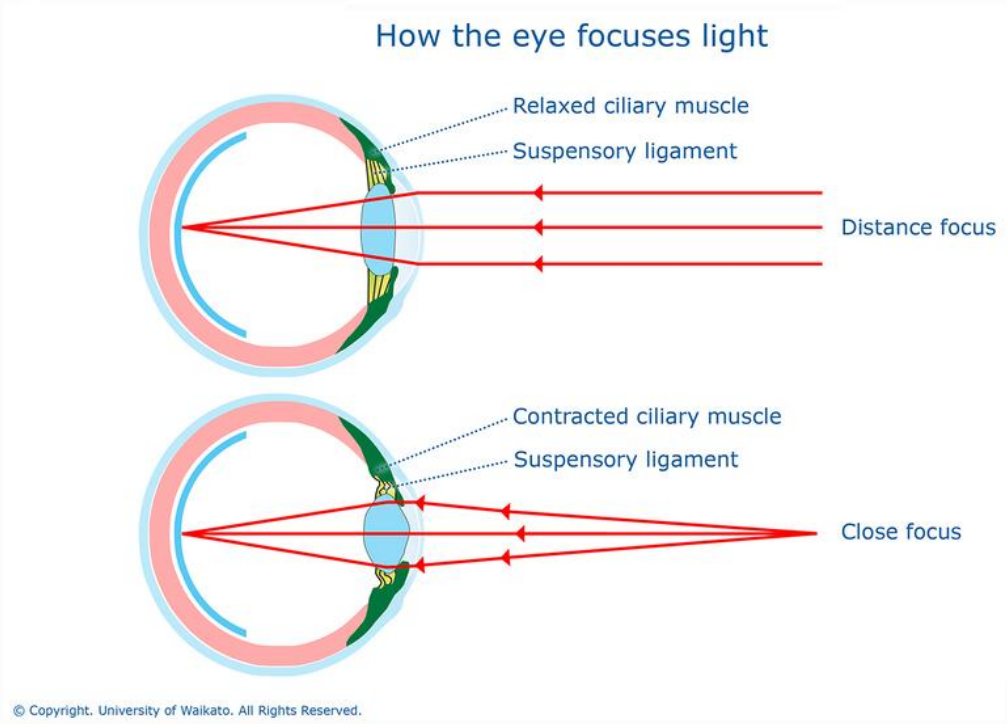
Everything you need to know about JPEG files | Adobe

1. In 1986, the Joint Photographic Experts Group (JPEG) created a standard to compress graphics files enough to work on a PC.
2. JPEG files came into their own with the advent of digital cameras and the World Wide Web. Contains *metadata*.
3. JPEG compress the data to make the files smaller, i.e. "**LOSSY**"
4. A RAW file is the **uncompressed and unprocessed image data** captured by a digital camera or scanner's sensors. Shooting in RAW captures a high level of image detail, with large file sizes and lossless quality. Gives you the most data to work with.
5. RAW files are proprietary.


focus

FOCUS


focal
plane
subject
lens
film/
sensor


How the eye focuses light
Relaxed ciliary muscle
Suspensory ligament
Distance focus
Contracted ciliary muscle
Suspensory ligament
Close focus
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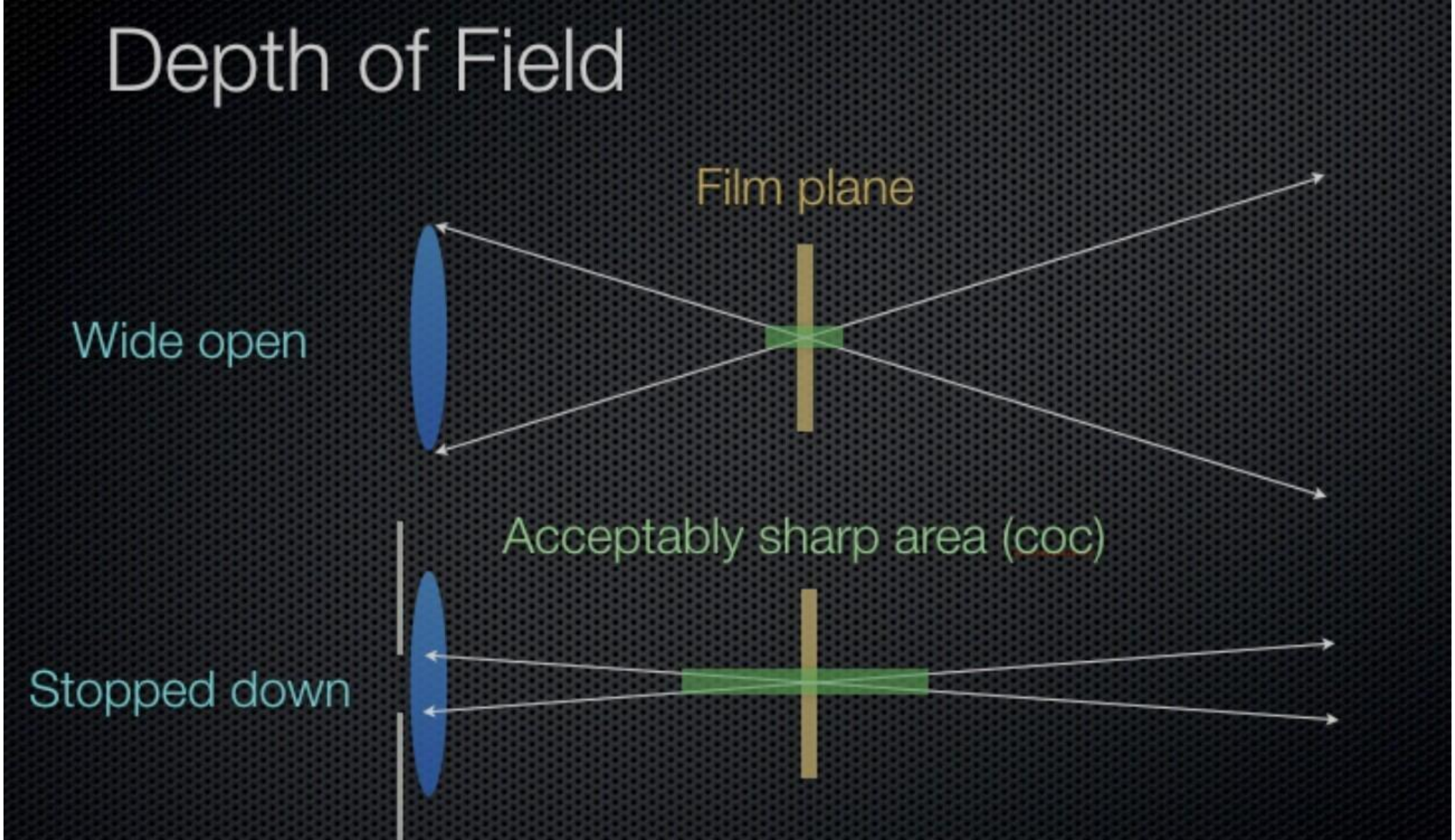
Depth of Field



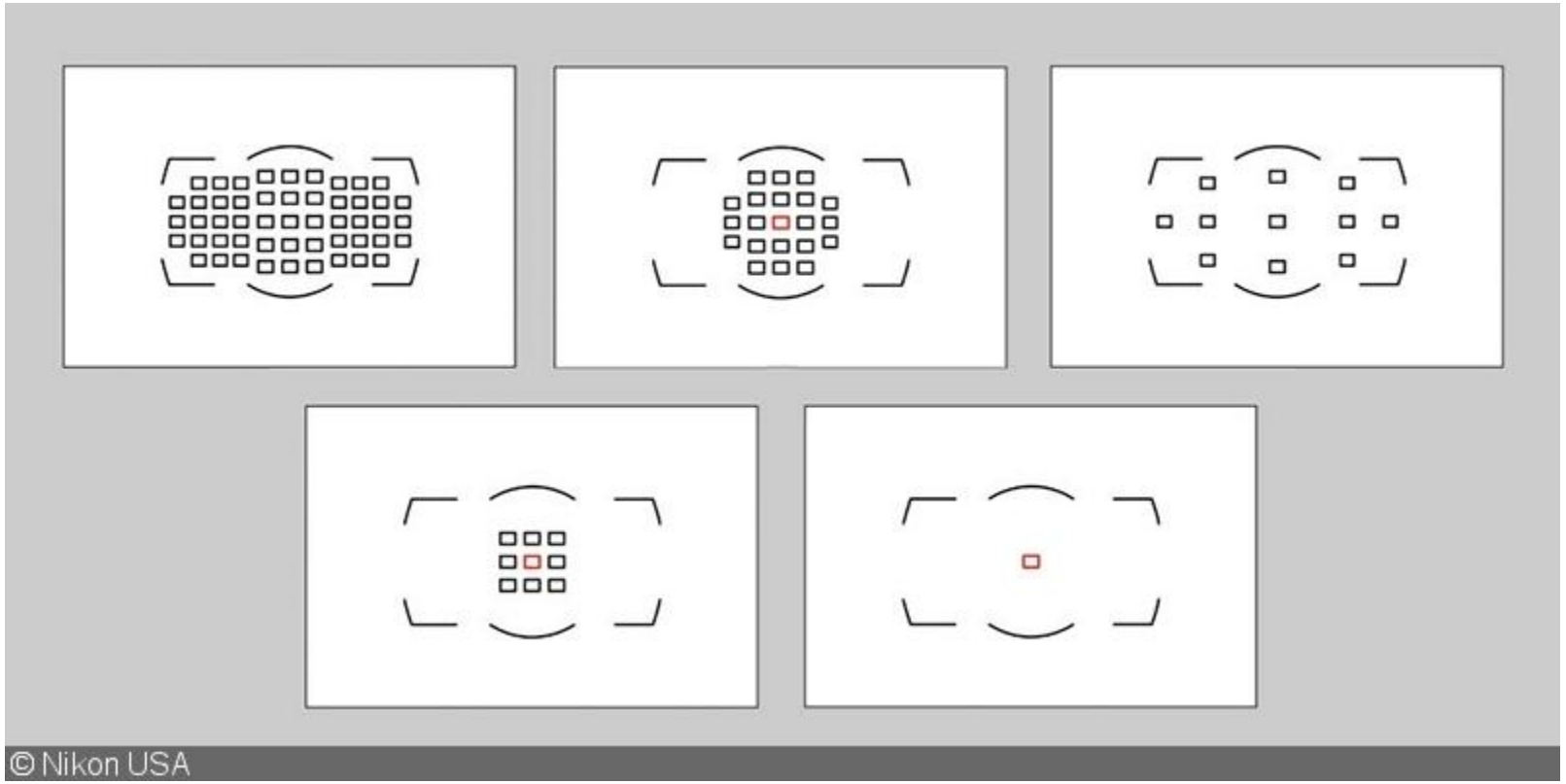
BOKEH

Bokeh is a word with Japanese origins, defined as “the way the lens renders out-of-focus points of light.” The word comes from the Japanese word boke (暈け or ボケ), which means “haze” or “blur.” (The “h” was introduced to help English speakers pronounce the word correctly [BO - KEH].)

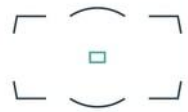
Seriously...What's the Correct Pronunciation of 'Bokeh?' | No Film School

“BO KAY”

FOCUS



UNDERSTANDING CAMERA AUTOFOCUS AREA MODES

AF AREA MODES	HOW IT WORKS	WHEN TO USE IT
SINGLE POINT AREA MODE (SINGLE POINT AF / MANUAL AF POINT)	• You can select a single focus point • Gives more control and precision • The more focus points your camera has, the more precisely you can focus on your subject	**Best AF Area for static subjects:** • Landscape • Still Portraits • Macro • Architecture 
DYNAMIC AREA MODE (DYNAMIC AF AREA / AF POINT EXPANSION)	• Once you select your focus point, if your subject moves, the camera uses the selected point as well as the surrounding points to keep the subject sharp. • Modern cameras allow to select different areas in groups of 9, 21, 51 points, etc, depending on your subject and movement.	**Best AF Area for moving subjects:** • Wildlife • Sports 
AUTO AREA MODE (AUTO AF AREA / AUTOMATIC AF POINT SELECTION)	• This mode is completely automatic • The camera decides which focus points to use for a given scene • It can focus on the wrong subject/area. Not recommended when you need more control over your focus point.	**Best AF Area for:** • Scenes where you want to quickly focus on something easy and close to the camera 
EYE AUTOFOCUS (EYE-AF)	• The camera automatically detects the subject's eye • Modern cameras can track the eyes of different subjects even if they're in motion	**Best AF Area for:** • Portraits of people/wildlife 

Each camera manufacturer uses different nomenclature for the same Autofocus Area Modes. Check your camera manual to find your camera Autofocus Area names.

TAKING SHARP PHOTOS:
Causes of Image Softness

1. Subject is moving.
2. Camera is moving.
3. Subject is not in focus.
4. Lens and/or filter is dirty.
5. Cheap lens.
6. High ISO capture.
7. Small aperture.
8. Mirror “slap” in DSLR.
9. Image stabilization in use on a tripod.
10. Atmosphere.

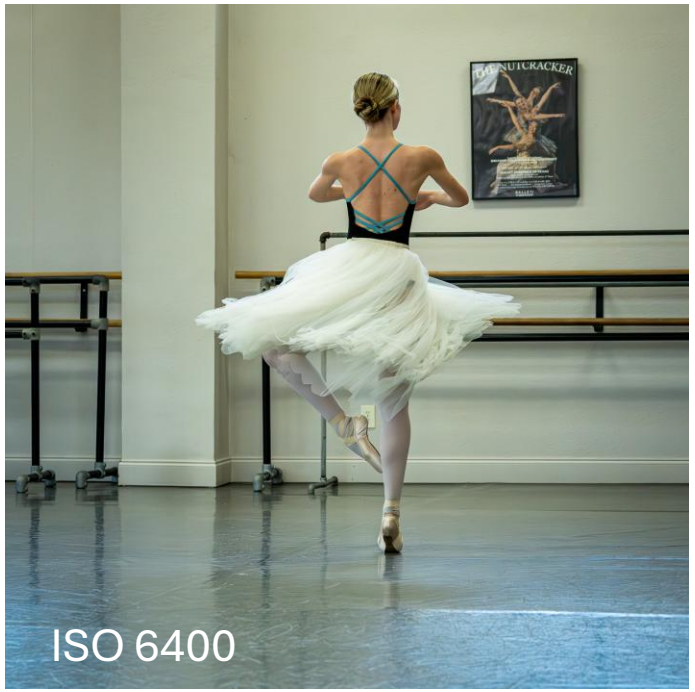
WHAT WOULD YOU DO?

PUTTING IT ALL TOGETHER

WHAT WOULD YOU DO?

1. WHAT ARE MY PRIMARY GOALS FOR THIS SHOOT?
    1. PHOTOGRAPHING DANCERS IN MOTION
    2. MAKE INTERETING IMAGES
    3. DON’T GET IN THE WAY
2. WHAT ARE THE IMPORTANT PHYSICAL CONSIDERATIONS?
    1. LIGHTING CONDITIONS
    2. SPACE LIMITATIONS
    3. CLUTTERED BACKGROUNDS
3. HOW CAN I ACHIEVE MY GOALS?
    1. FAST SHUTTER SPEED, SUBJECT/EYE DETECTION, SHOOTING POSITION, OVEREXPOSE, SHOOT WIDE, SILENT BURST

F/4, 1/1000 sec, +1 EV, Auto ISO




ISO 80, F/4, 1/13 sec,
+1 EV, Aperture Priority

REFERENCES

AUTO White Balance is KILLING Your Colors (Here's the Fix)

What is DEPTH OF FIELD in photography?

Exposure Compensation: An Easy Guide
https://www.lightstalking.com/exposure-compensation-easy-guide/

The most useful DSLR feature? HIGHLIGHT OVER-EXPOSURE WARNING — Robert Oliver, photographer (robertoliverphoto.com)

Exposing to the Right Explained (photographylife.com)

How to hold a camera correctly for sharp photos (avoid camera shake)

Do THIS to get SHARP photos EVERY time

There's More to Shutter Speed Than You Might Expect | Fstoppers