



PHOTOGRAPHY = WRITING WITH LIGHT

PHOTOGRAPHY IS SO EASY
ANYBODY CAN DO IT

**BUT, MAKING A GOOD
PHOTOGRAPH TAKES PRACTICE**



BASIC PHOTOGRAPHY-CAPTURE

***EXPOSURE: GETTING IT CLOSE IN
THE CAMERA***

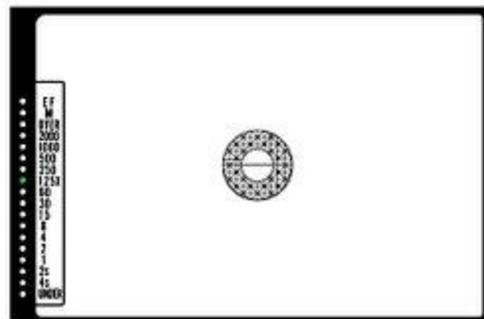
LARRY PETTERBORG

SPRING, 2026

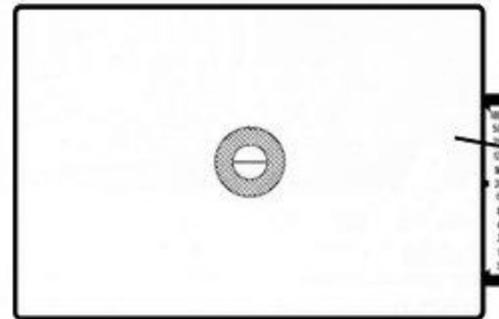


INTRODUCTION

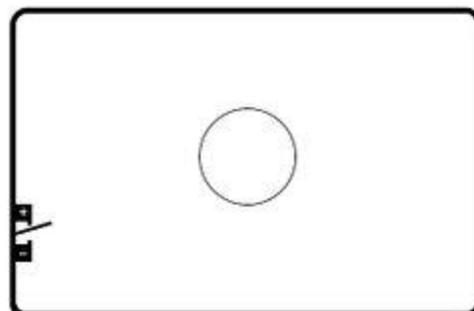
PENTAX ME SUPER



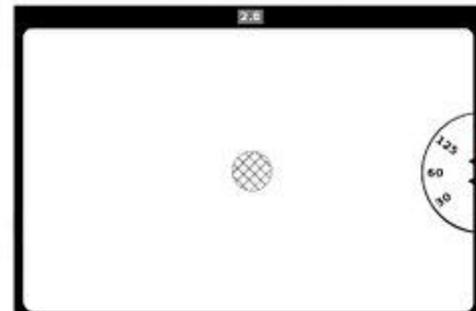
CANON AV-1



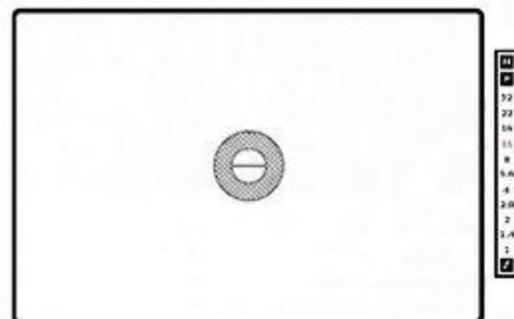
OLYMPUS OM-1n



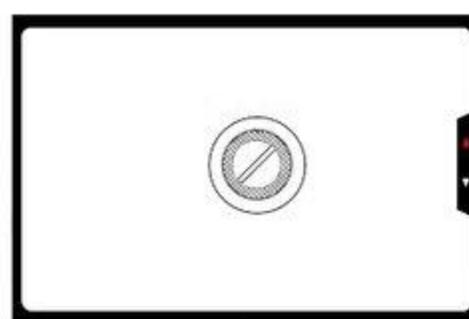
PENTAX MX



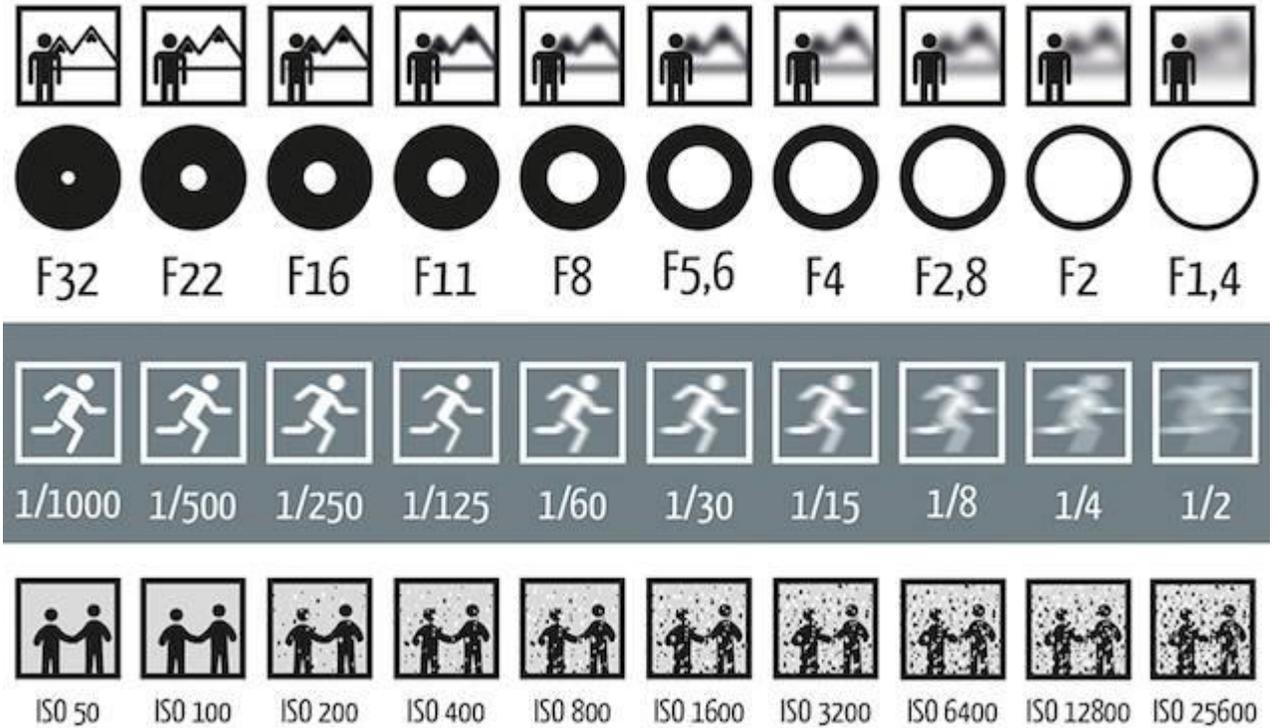
CANON AE-1 PROGRAM



PRAKTICA MTL50



WHAT IS A STOP?



Answer: ½ or 2X

EXPOSURE CLASS REFERENCES

- Michael Frye. *Digital Landscape Photography: in the Footsteps of Ansel Adams and the Great Masters*. Second Edition.
- <https://www.bhphotovideo.com/explora/photography/tips-and-solutions/understanding-camera-metering-modes>
- [Understanding Metering and Metering Modes \(photographylife.com\)](http://photographylife.com/understanding-metering-and-metering-modes)
- [How to Use The Zone System by Ansel Adams for Best Digital Photos \(photographycourse.net\)](http://photographycourse.net/how-to-use-the-zone-system-by-ansel-adams-for-best-digital-photos)
- [How to Use the Ansel Adams Zone System in the Digital World | Fstoppers](http://fstoppers.com/ansel-adams-zone-system-digital-world)
- [Understanding Histograms in Photography \(photographylife.com\)](http://photographylife.com/understanding-histograms-in-photography)
- [How to Read \(and Use\) Histograms for Beautiful Exposures \(digital-photography-school.com\)](http://digital-photography-school.com/how-to-read-and-use-histograms-for-beautiful-exposures)
- [Exposing to the Right Explained \(photographylife.com\)](http://photographylife.com/exposing-to-the-right-explained)
- [Exposing to the Right \(digital-photography-school.com\)](http://digital-photography-school.com/exposing-to-the-right)

CLASS OBJECTIVES:

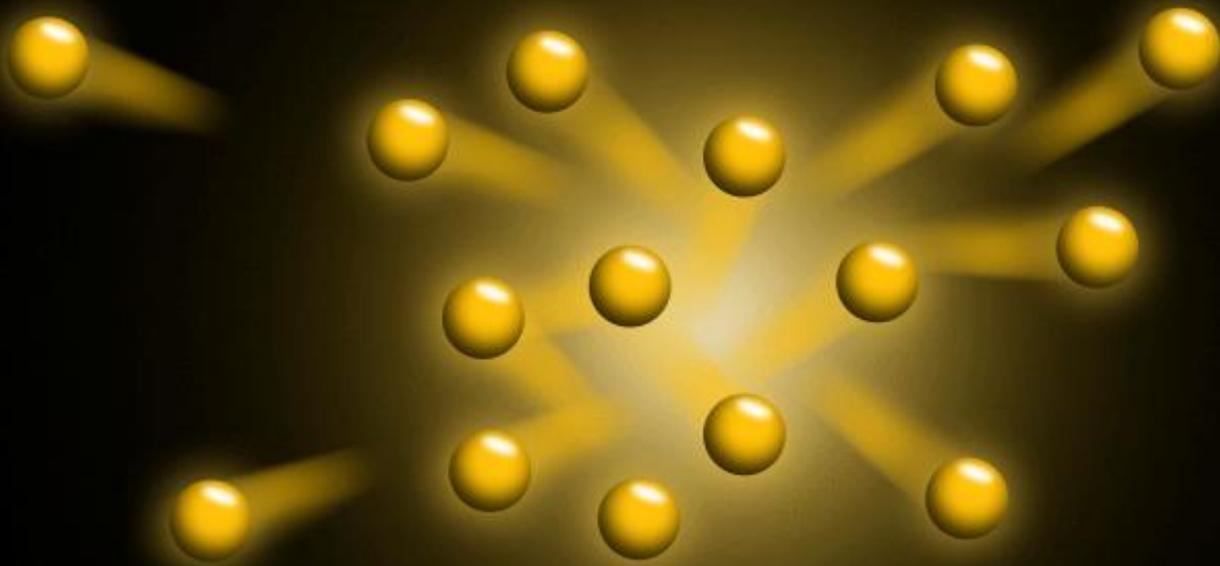
BY THE END OF THIS CLASS, YOU WILL BE ABLE TO

- 1. DEFINE “**EXPOSURE**”
- 2. ARTICULATE WHAT DETERMINES A “**PROPER**” EXPOSURE
- 3. DESCRIBE THE EFFECTS OF VARYING
 - APERTURE SIZE
 - SHUTTER SPEED
 - ISO
- 4. UTILIZE VARIOUS METERING AND SHOOTING MODES, THE HISTOGRAM, BLINKIES, AND EXPOSURE COMPENSATION
- 5. UNDERSTAND “**EXPOSE TO THE RIGHT**” (ETTR)

CLASS SCHEDULE

- SESSION 1: PRESENT CLASS OBJECTIVES, DEFINE “EXPOSURE”, DISCUSS IDEAS OF A “PROPER EXPOSURE”, INTRODUCE THE **EXPOSURE TRIANGLE**, DISCUSS METERING AND SHOOTING MODES. HOMEWORK ASSIGNMENT #1
- SESSION 2: HOMEWORK DISCUSSION, MORE ABOUT **HISTOGRAMS**, BLINKIES, EXPOSURE COMPENSATION, AND **ETTR**. HOMEWORK ASSIGNMENT#2

a particle or packet
of light energy

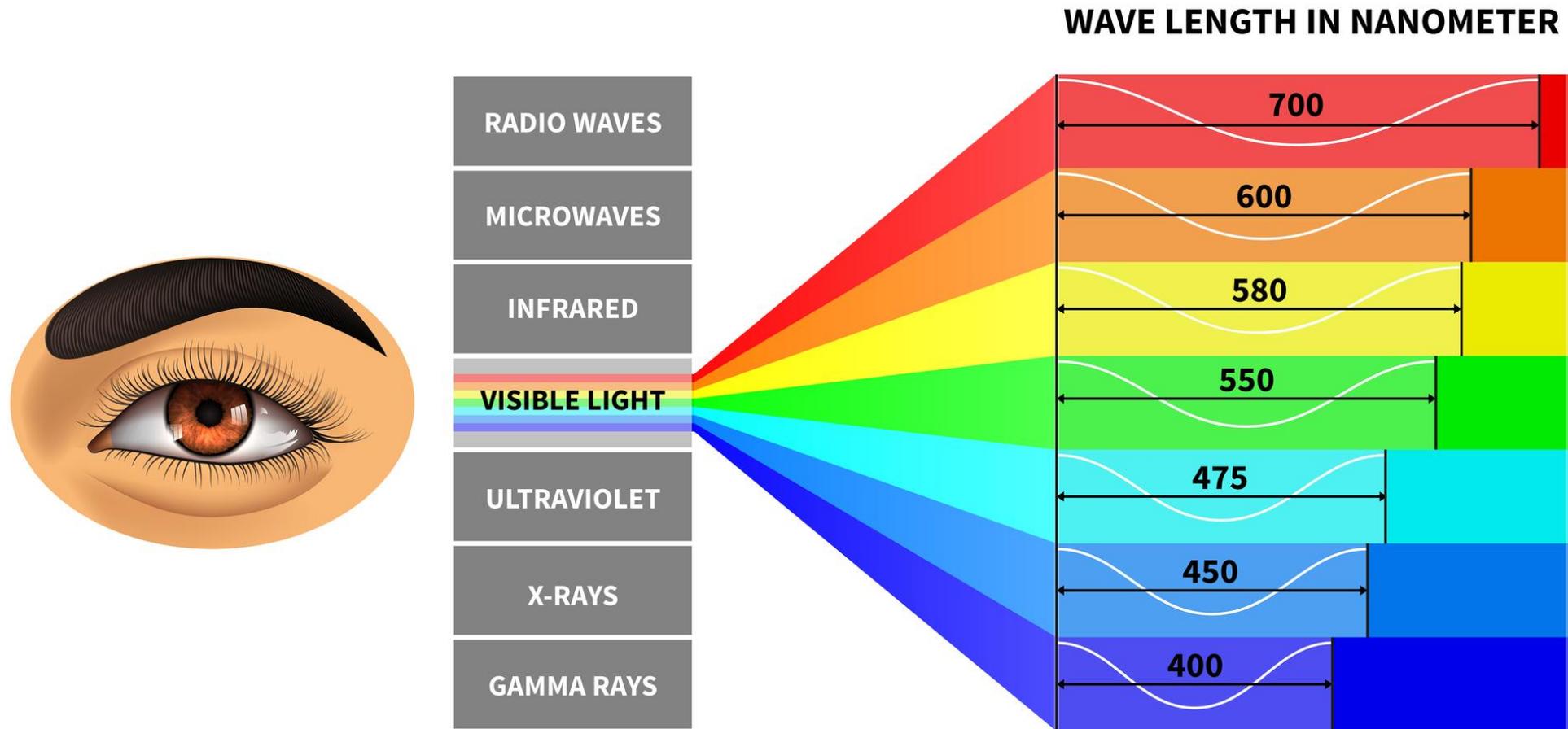


photon

Game Smartz flashcard

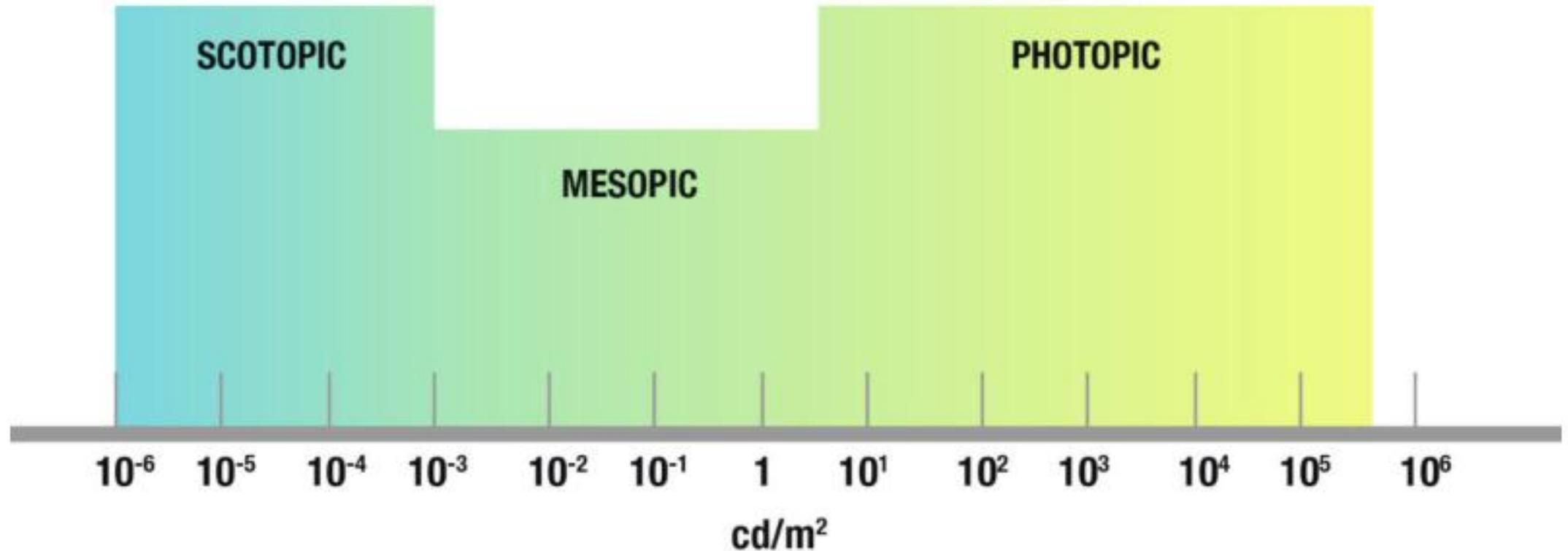
A photon is an elementary particle that is a quantum of the electromagnetic field, including electromagnetic radiation such as light and radio waves, and the force carrier for the electromagnetic force. Photons are massless, so they always move at the speed of light in vacuum, 299792458 m/s. [Wikipedia](#)

THE LIGHT WE CAPTURE IS MOSTLY "REFLECTED"!!



FOR PHOTOGRAPHY, THINK OF LIGHT AS HAVING BOTH QUANTITY AND QUALITY. EXPOSURE IS BASED ON AMOUNT, WHILE THE **QUALITY OF THE LIGHT IS KEY** TO MAKING A GREAT IMAGE.

DYNAMIC RANGE OF THE HUMAN EYE: 30 STOPS



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YOUR CAMERA SENSOR HAS 10 TO 15 STOPS

IN THE BEGINNING



The oldest known photograph was taken by Joseph Nicéphore Niépce in 1826–27. It depicts the view out of Niépce's upstairs window, and it is extremely low quality. (8 hours)



First Photo Of A Human, 1837

**IT TOOK A LONG TIME TO GET
SHORT EXPOSURES**



WHAT IS *EXPOSURE* IN PHOTOGRAPY?

A SIMPLE ANALOGY



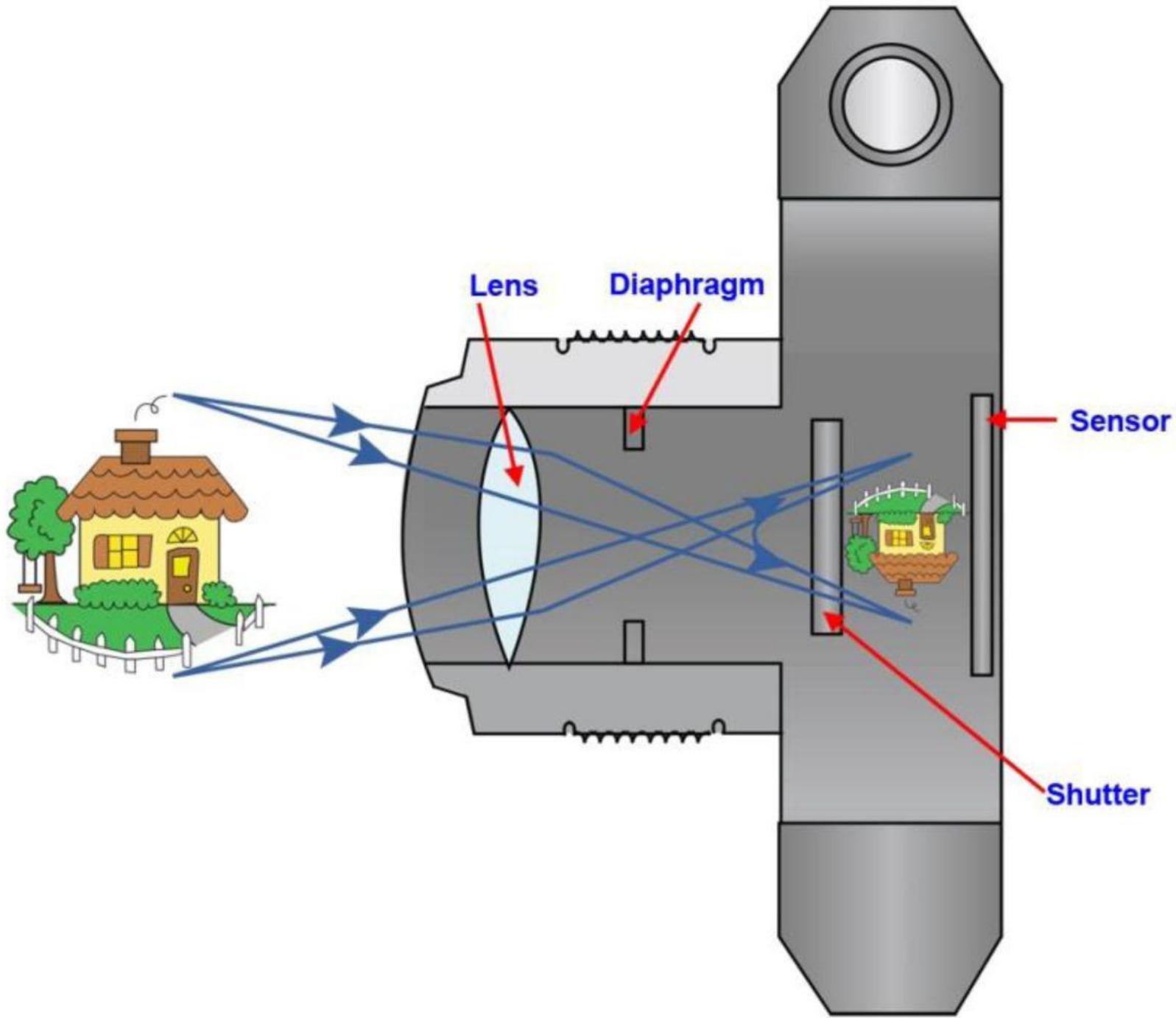
**EXPOSURE IS
THE TRANSFER
OF ENERGY TO
A SENSOR!**

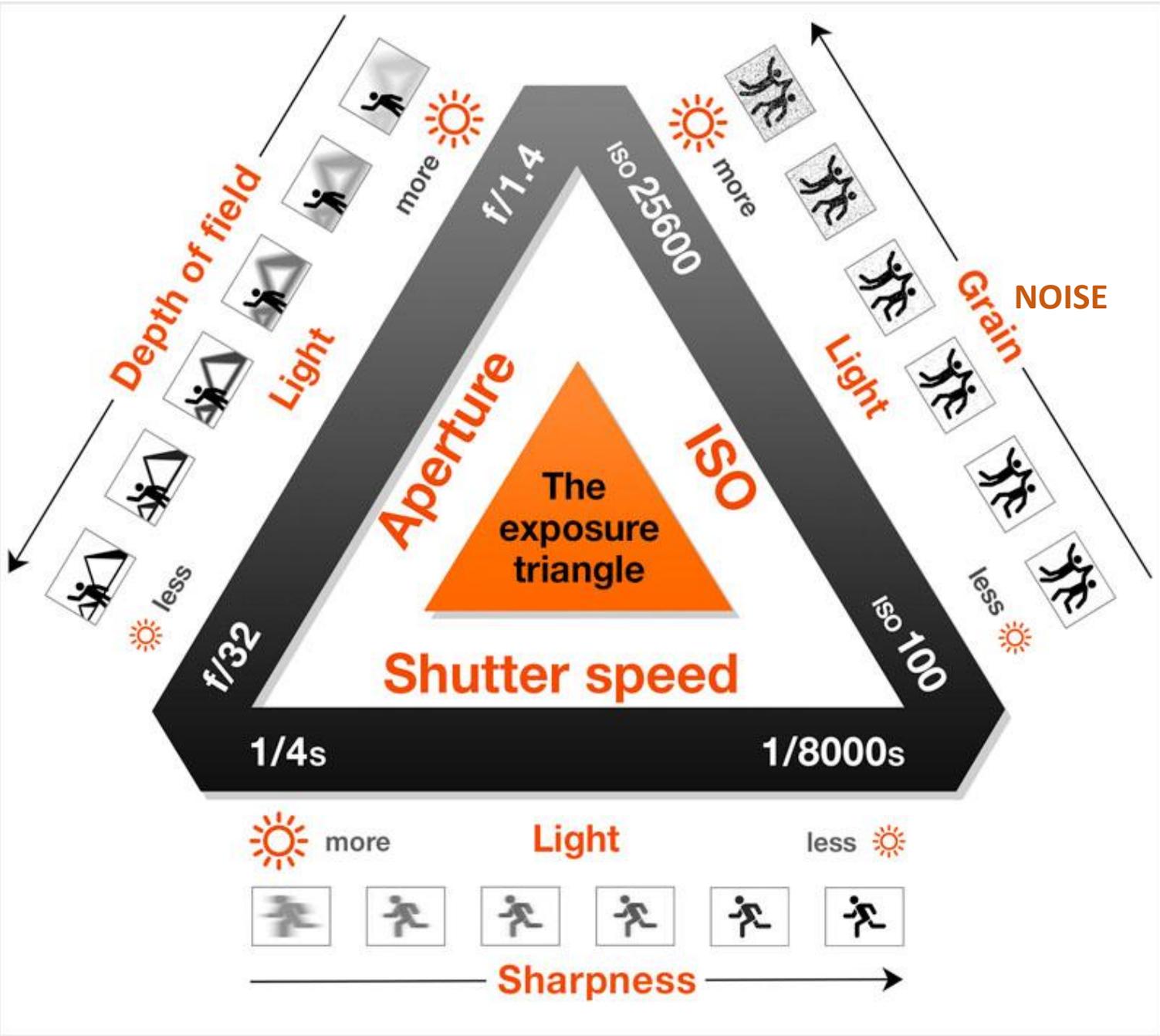
EXPOSURE IS DETERMINED BY

1. HOW LONG SHUTTER IS OPEN
2. THE SIZE OF THE LENS OPENING (APERTURE)
3. THE SENSOR (ISO)



YOUR EXPOSURE
(THINK OF A PHOTON AS A WATER MOLECULE)





**YOU CAN
ONLY SET
TWO AT A
TIME!**

***YOU ARE THE AUTHOR
OF WHAT YOUR
PHOTOGRAPH SAYS!!!***

WHAT/WHO CONTROLS YOUR EXPOSURES?

YOU OR THE CAMERA?
WHY DOES IT MATTER?

WHAT KIND
OF PHOTO
DO YOU
WANT?

A SNAPSHOT?

A THOUGHT SHOT?

***YOU MUST DECIDE WHAT IS
MOST IMPORTANT.***

MODE DIAL

Automatic

Portrait

Macro

Landscape

Sports

Night Portrait

Program P

Shutter-priority Tv

Aperture-priority Av

Manual exposure M

Auto Depth-of-field A-DEP

Flash off

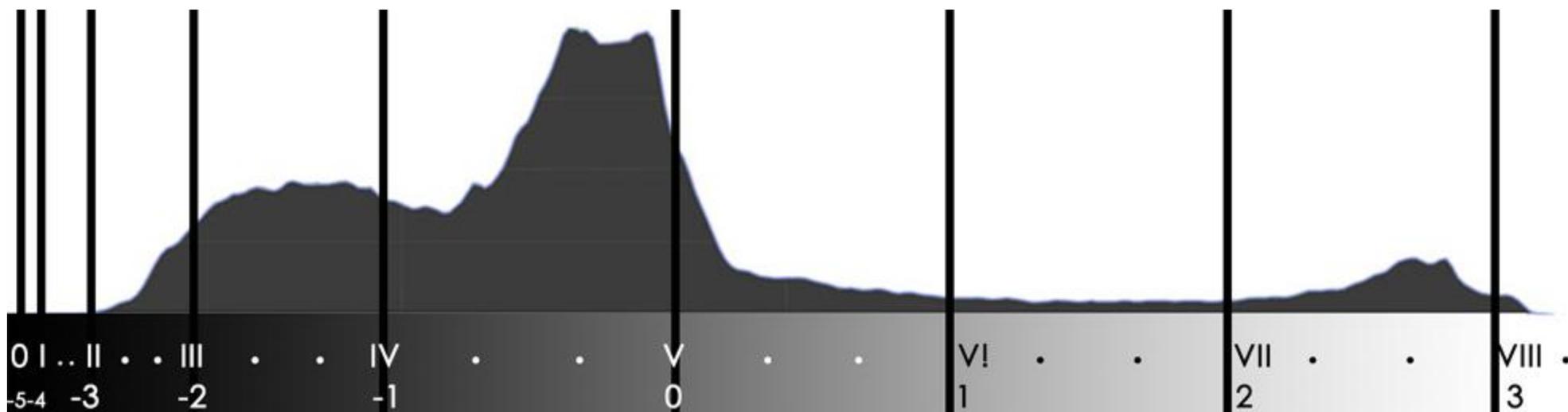
Basic modes

Advanced modes

The Zone System

ANSEL ADAMS & FRED ARCHER, 1940





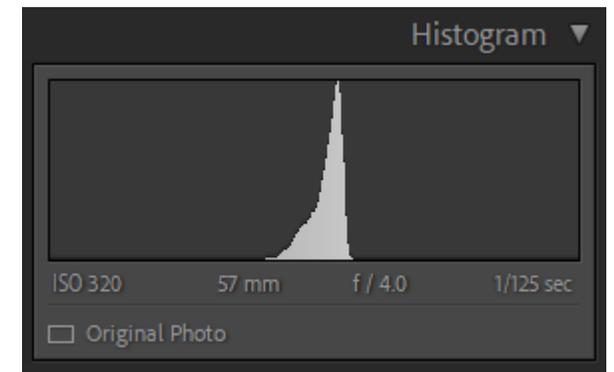
DIGITAL CAMERA HISTOGRAM

**“EXPOSE FOR THE HIGHLIGHTS
PROCESS FOR THE SHADOWS”**

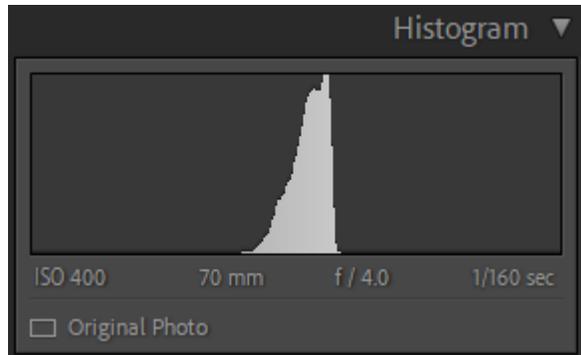
WHITE PAPER

“18% GRAY”

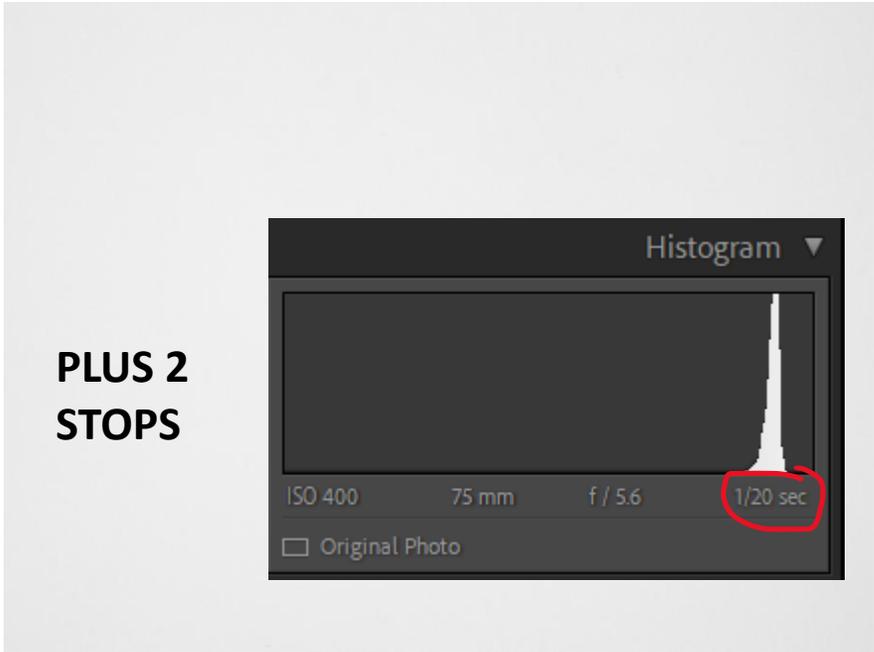
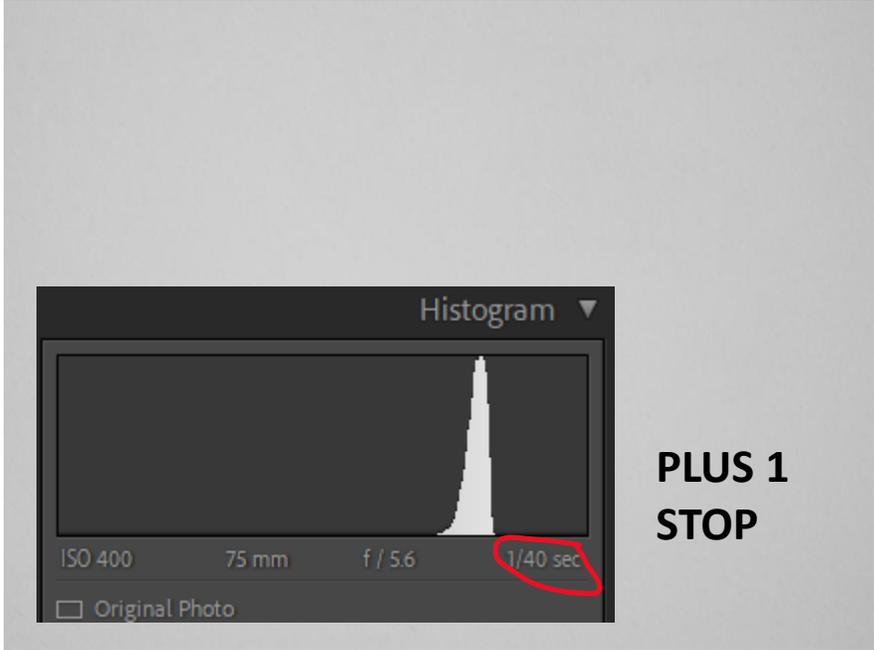
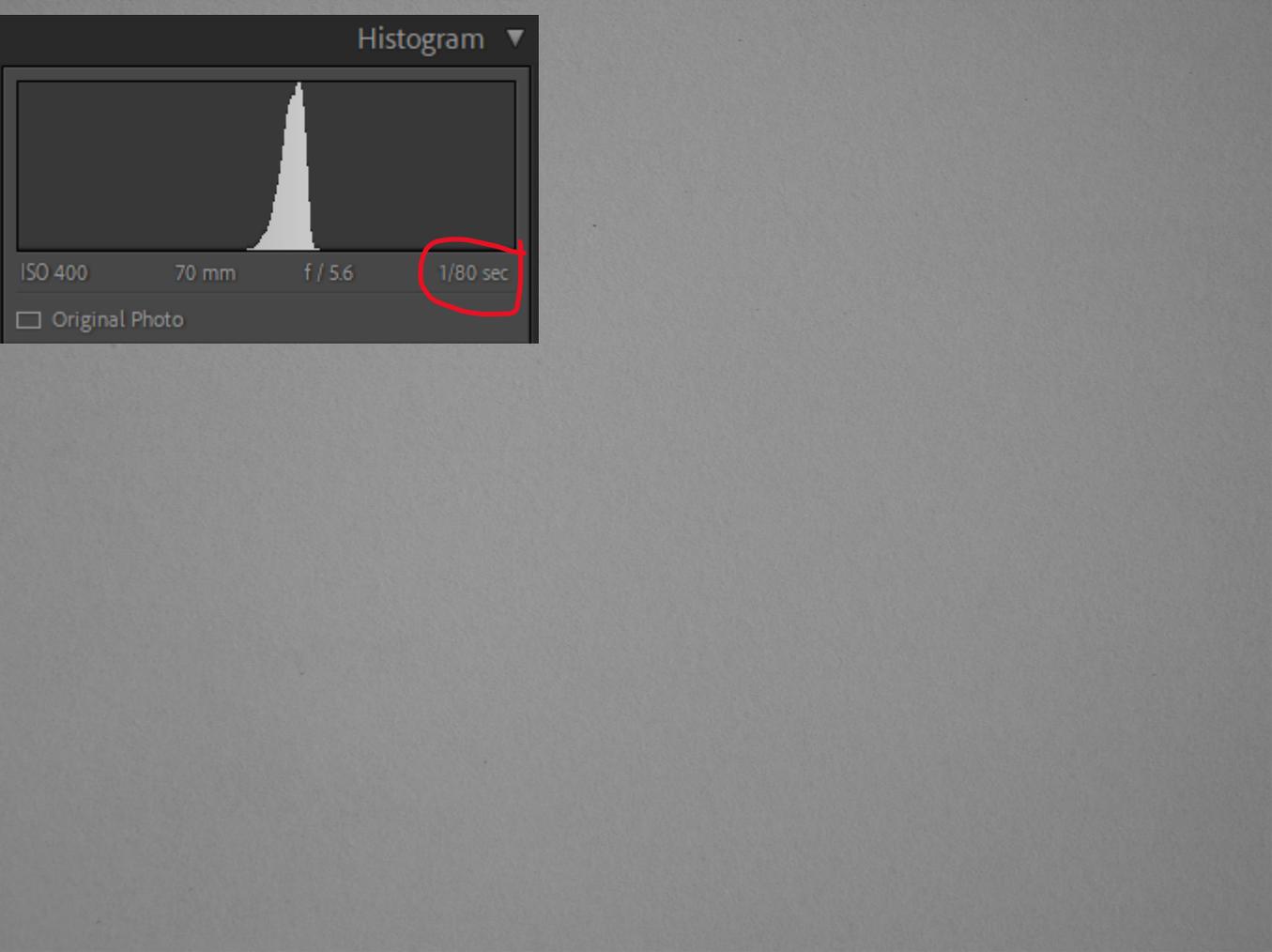
AUTO



PROGRAM



APERTURE PRIORITY



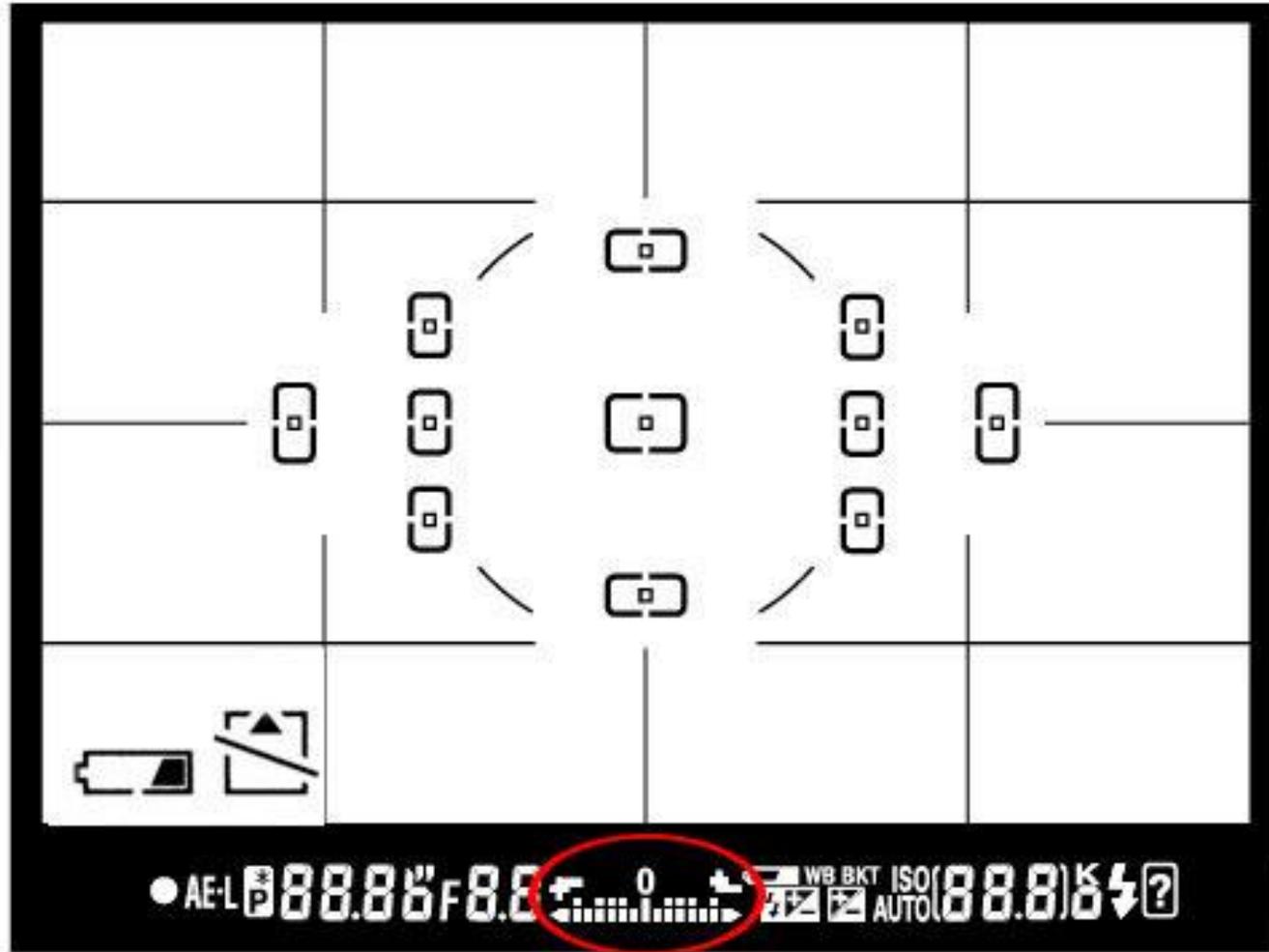
EXPOSURE MODES

SPOT METERING

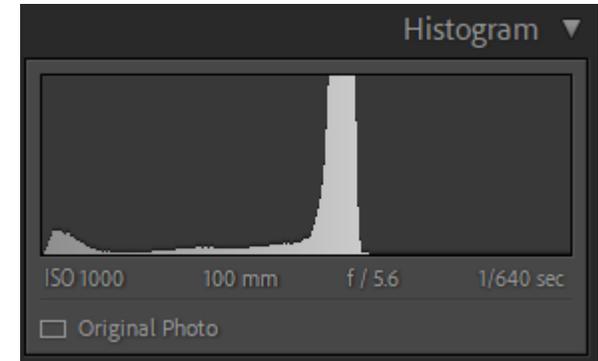
CENTER WEIGHTED
METERING

EVALUATIVE (MULTISEGMENT,
ESP) METERING

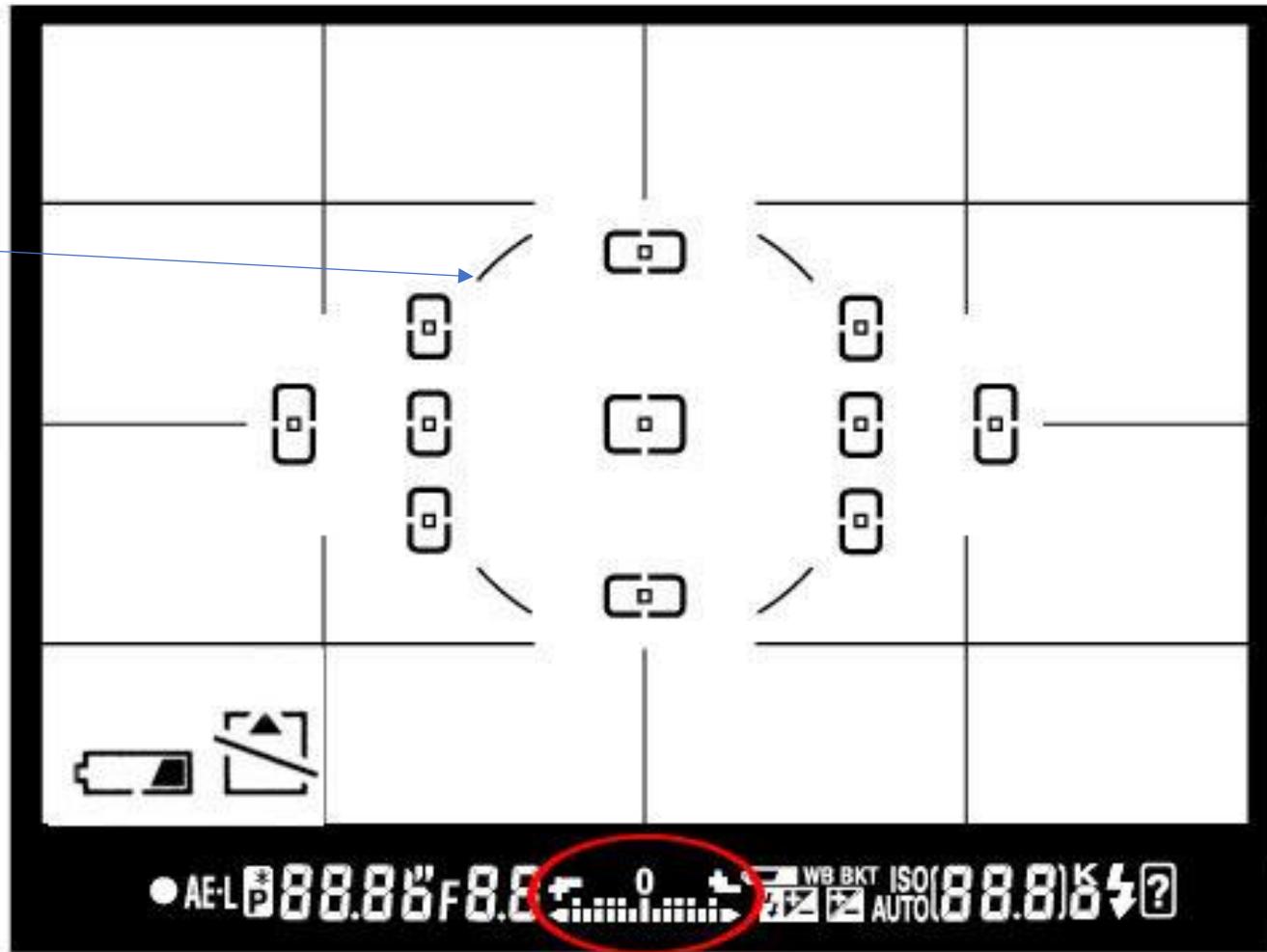
EVALUATIVE



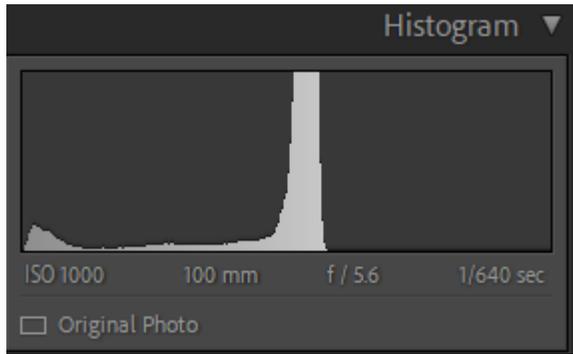
EVALUATIVE (ESP)

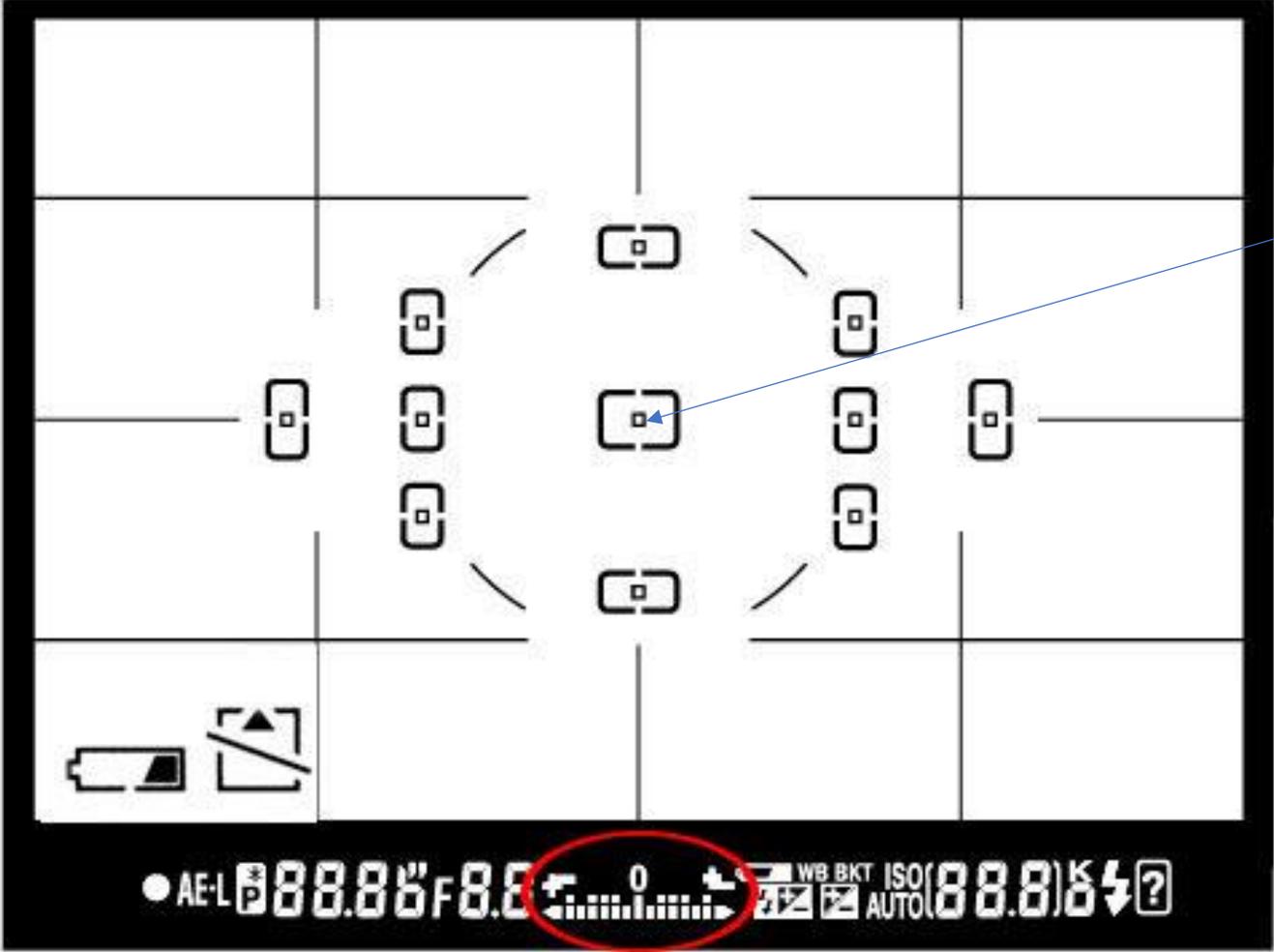


CENTER
WEIGHTED



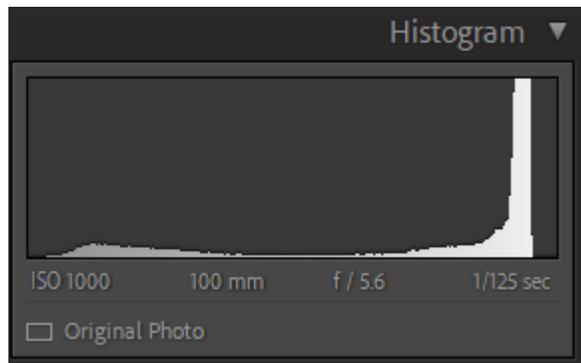
CENTER WEIGHTED





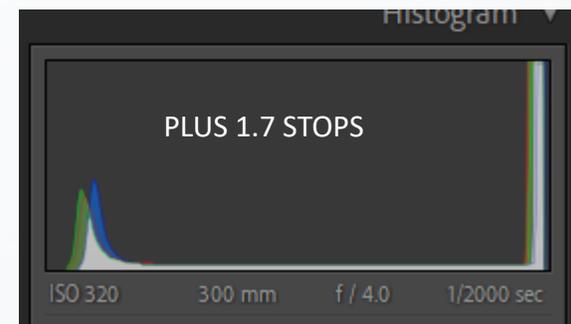
SPOT

SPOT



WHAT IS A PROPER
EXPOSURE?

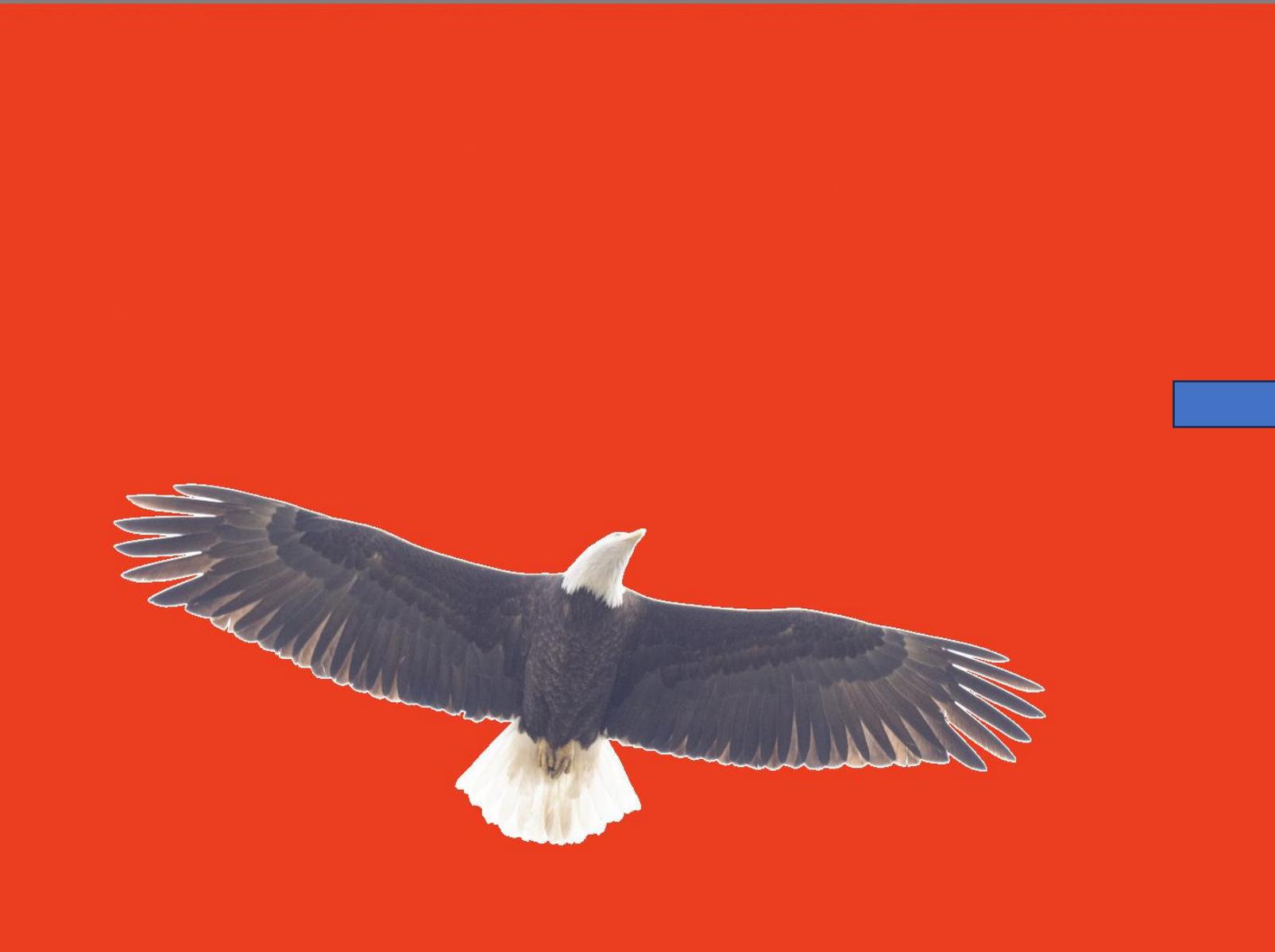
IT DEPENDS!



_2130171.ORF

2/13/2026 12:23:55.000 PM

5184 x 3888



Histogram

ISO 320 300 mm f / 4.0 1/2000 sec

Original Photo

Basic

Auto B&W HDR

Profile: Adobe Color

WB: As Shot

Temp 5350

Tint +6

Tone

Exposure +2.02

Contrast 0

Highlights 0

Shadows 0

Whites 0

Blacks 0

Presence

Texture 0

Clarity 0

Dehaze 0

Vibrance 0

Saturation 0

Tone Curve

Adjust

Refine Sat

Input Output





NEXT TIME

- 1. HOMEWORK DISCUSSION
- 2. THE HISTOGRAM
- 3. “BLINKIES” (EXPOSURE INDICATORS)
- 4. EXPOSURE COMPENSATION
- 5. “ETTR” (EXPOSE TO THE RIGHT): A STRATEGY FOR DIGITAL CAPTURE

HOMework
(YOU MAY
NEED TO
CONSULT
WITH YOUR
OWNER'S
MANUAL)

The purpose of these exercises is to gain a better understanding of shooting and metering modes.

- 1. Compare and contrast photographing the same scene in “Auto”, “Program”, and “Priority” modes.**
- 2. Compare and contrast shooting the same subject with the three different metering modes.**

Be prepared to talk about your experience next time.

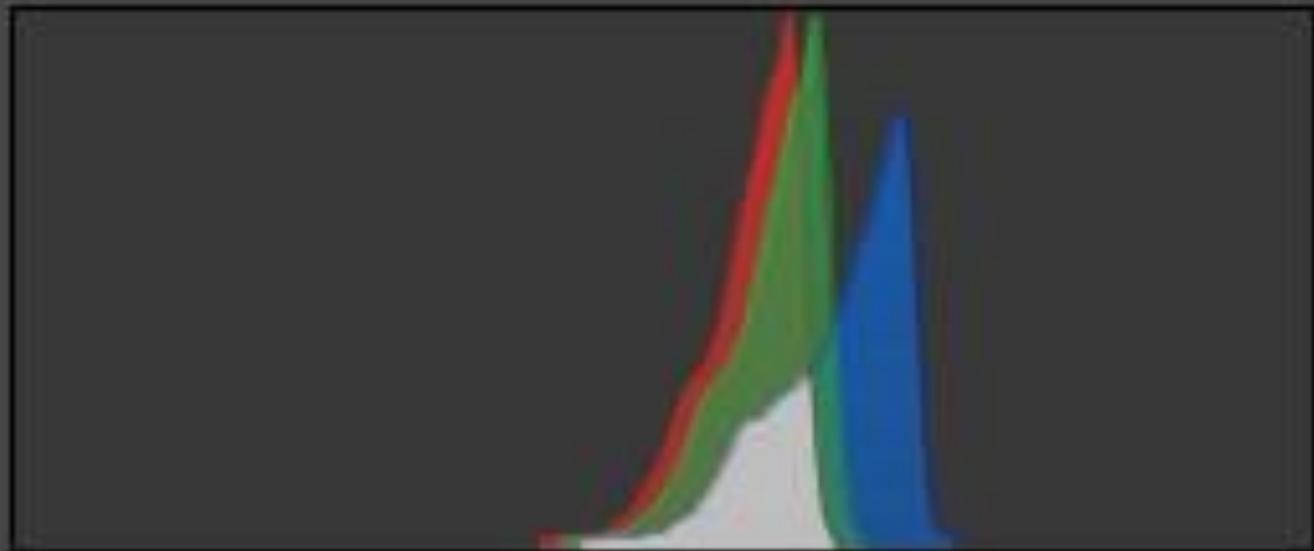


HOMework (YOU MAY NEED TO CONSULT WITH YOUR OWNER'S MANUAL)

The purpose of these exercises is to gain a better understanding of your camera's dynamic range.

1. Find an evenly-lit, textured wall to photograph.
2. Mount your camera on a tripod and set it to RAW capture in manual mode ([Camera Manual Mode in 15 Minutes – PictureCorrect](#)) at native ISO, spot metering, f/11 (FF) or f/8 (APS) or f/5.6 (m43), and auto white balance.
3. Test shadow detail by metering the wall (Zone 5) then under exposing by 2 stops (Zone 3) by increasing the shutter speed. Take a picture, then progressively increase the shutter speed by 1/3 or 1/2 stop until you reach Zone 0 (-5 stops).
4. Test highlights by adding 2 stops of light (original Zone 5 to Zone 7) taking a picture and then progressively reducing shutter speed by 1/3 or 1/2 stop to get to Zone 10 (5 stops).
5. Download the files and in your software, increase or decrease the brightness of the files by moving the Exposure slider to the number of stops to return to the base exposure. Examine the results to determine where image detail is lost in the shadows and highlights. That will approximate your camera's (sensor) dynamic range.
6. Be prepared to talk about your experience next time.

Histogram ▼



ISO 200

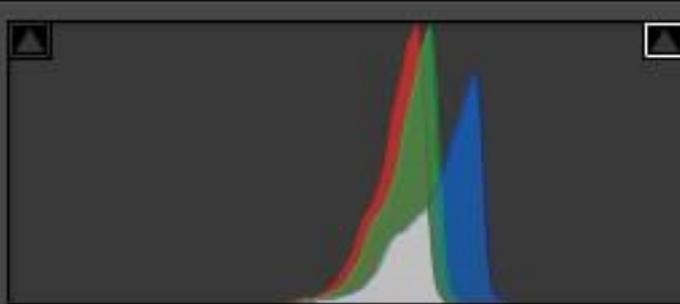
34 mm

f / 5.6

1/160 sec

Original Photo

Histogram



R 55.3 G 56.8 B 61.5 %

Original Photo



Basic

Auto B&W HDR

Profile: Adobe Color

WB: As Shot

Temp 4900

Tint +12

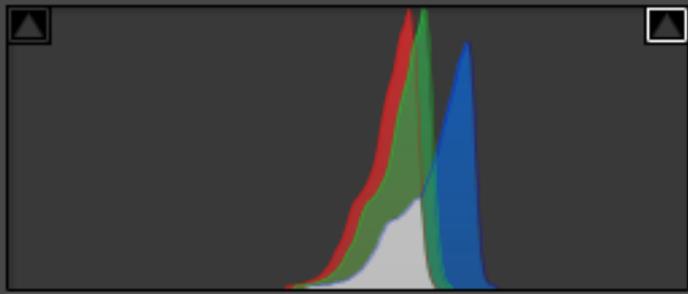
Tone

Exposure 2

Contrast 0



Histogram



R 57.0 G 58.9 B 63.9 %

Original Photo



Basic

Auto | B&W | HDR

Profile : Adobe Color

WB : As Shot

Temp 4900

Tint +12

Tone

Exposure -2

Contrast 0



Histogram ▾

R 55.3 G 56.8 B 61.5 %

Original Photo

Basic ▾

Auto B&W HDR

Profile: Adobe Color ▾

WB: As Shot ▾

Temp 4900

Tint +12

Tone

Exposure 2

Contrast 0

Histogram ▾

ISO 200 34 mm f / 5.6 1/160 sec

Original Photo

Histogram ▾

R 57.0 G 58.9 B 63.9 %

Original Photo

Basic ▾

Auto B&W HDR

Profile: Adobe Color ▾

WB: As Shot ▾

Temp 4900

Tint +12

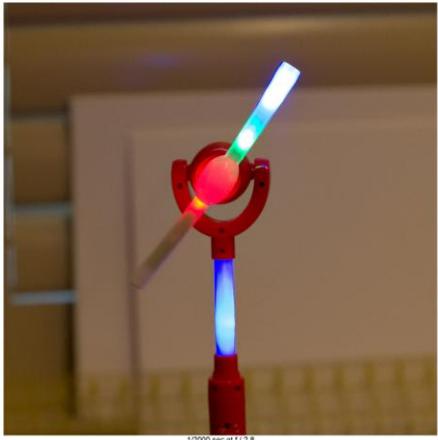
Tone

Exposure 2

Contrast 0

SHUTTER SPEED EXERCISE

BY DENNIS FRITSCHE



QUESTIONS?