Sponsored by LightShine Church and NPHS

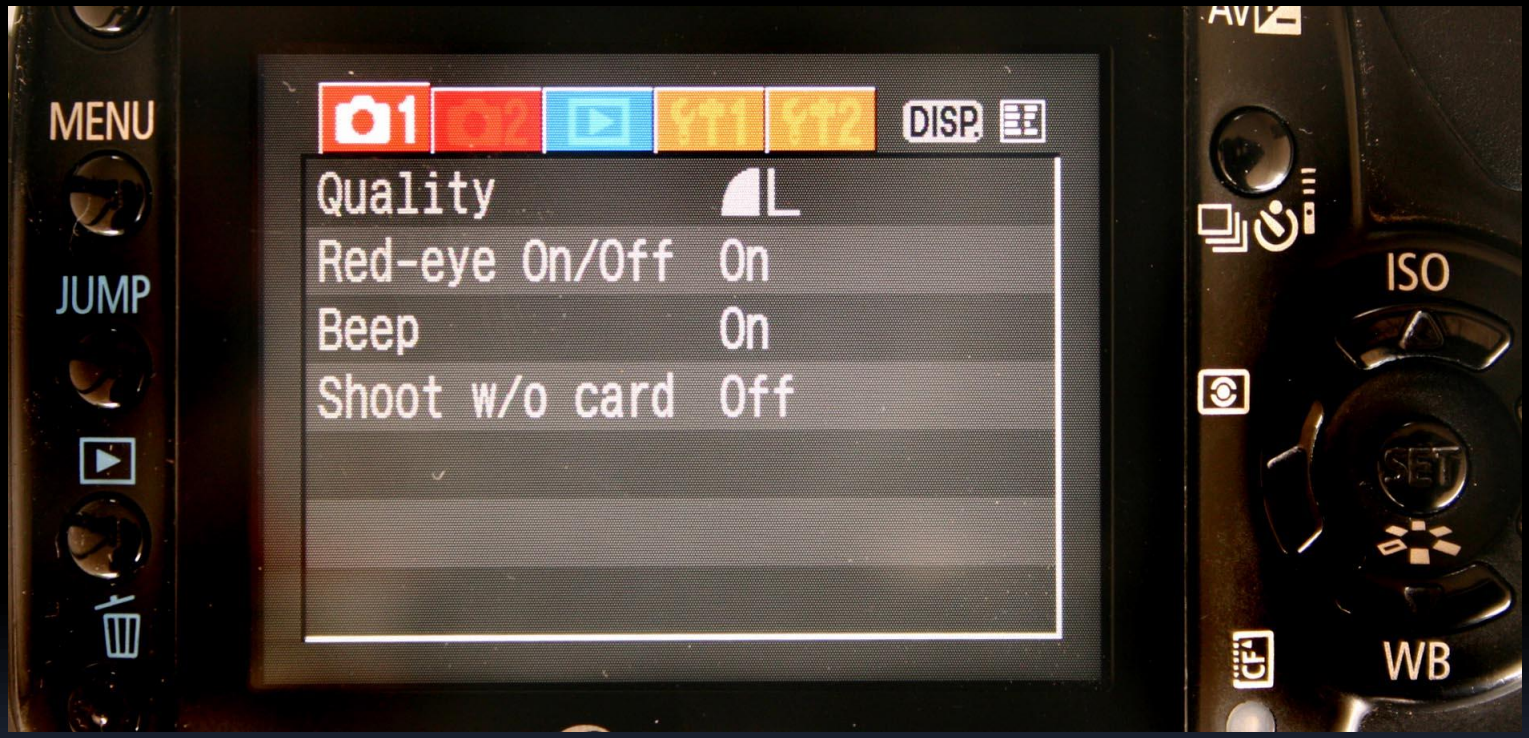
PHOTOGRAPHY PHOLKS

lightshine

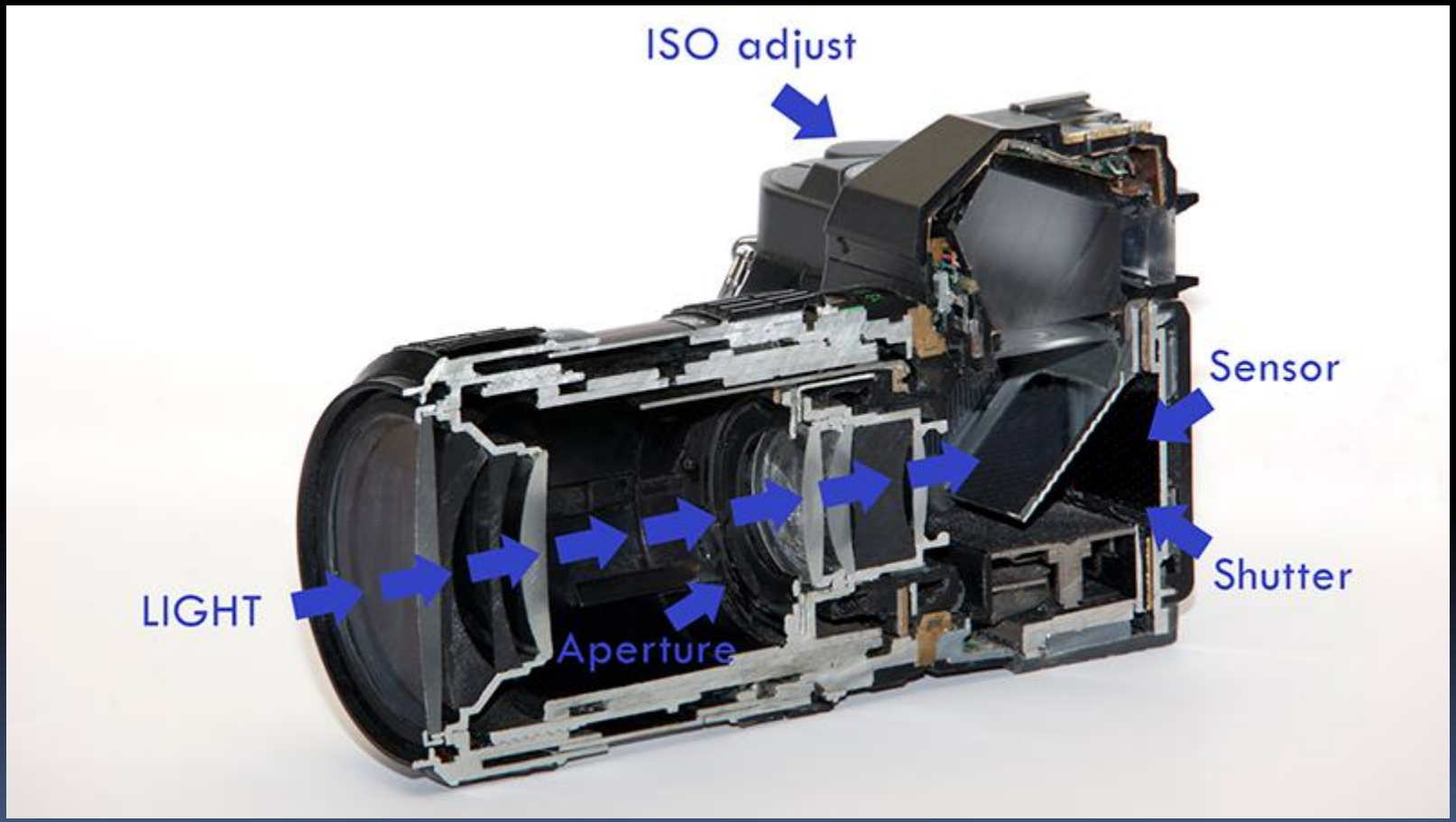
church

Annoucements

- Snacks are covered by Sidney, Masayo and Heather for Oct 28th
- Any takers for Nov 4th?
- File size and DSLR

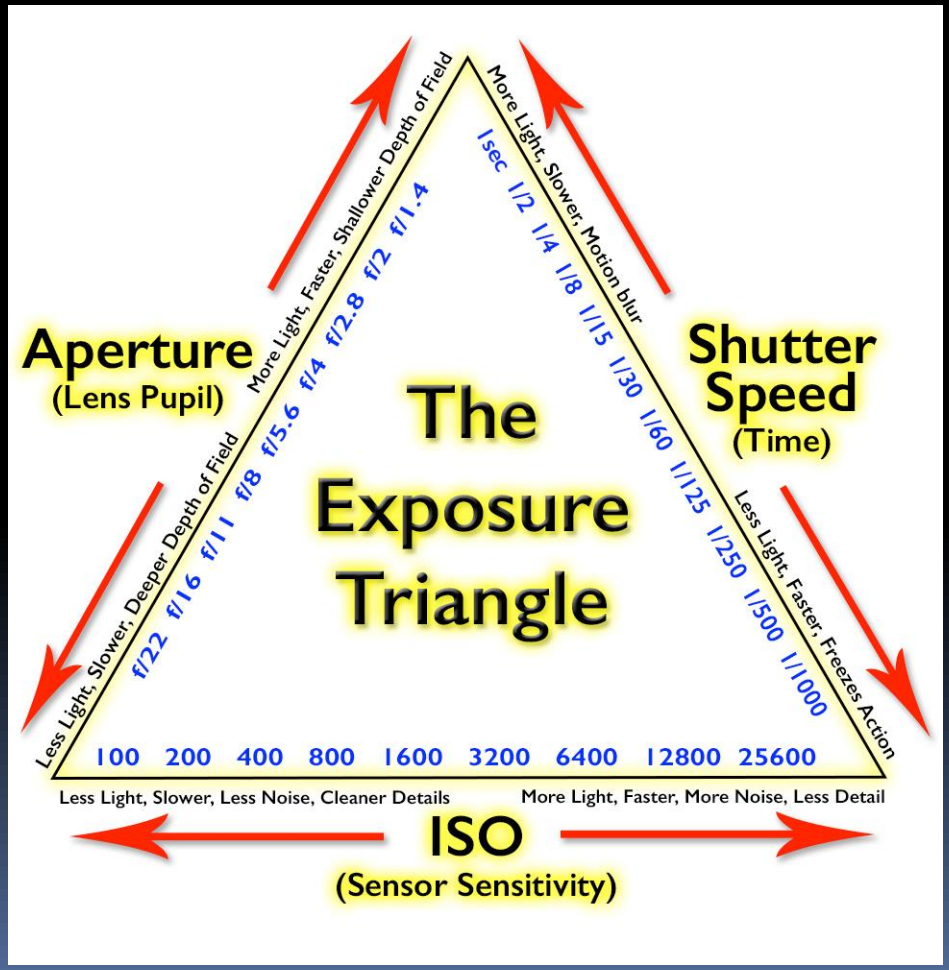

MENU
JUMP
DISP.
Quality L
Red-eye On/Off On
Beep On
Shoot w/o card Off
ISO
SET
WB


MENU
JUMP
Quality
3888x2592
L
L
M
M
S
S
RAW+ L
RAW
Av
ISO
SET
WB

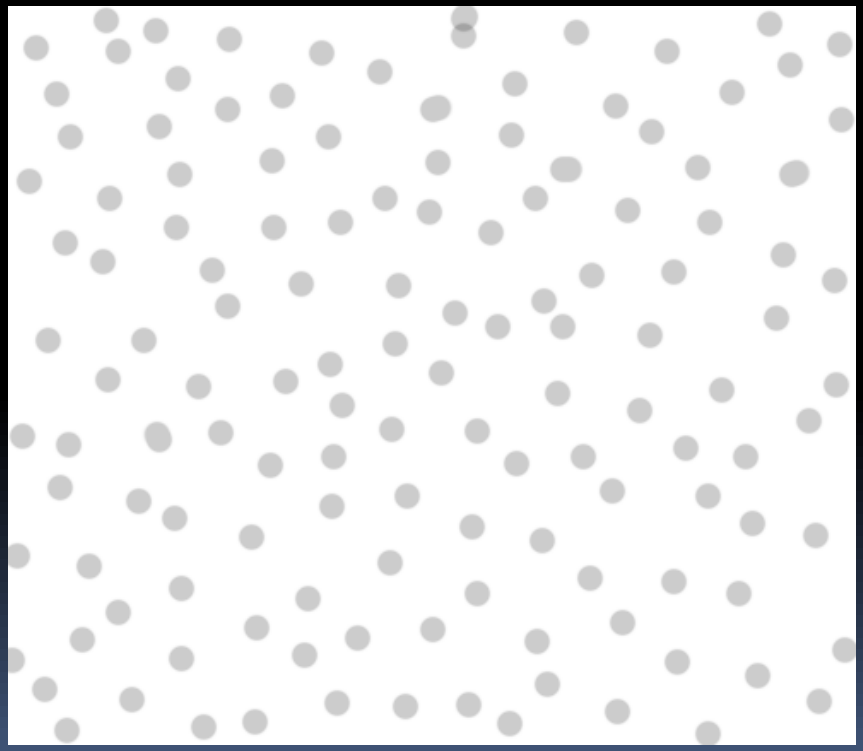

ISO adjust
Sensor
Shutter
LIGHT
Aperture

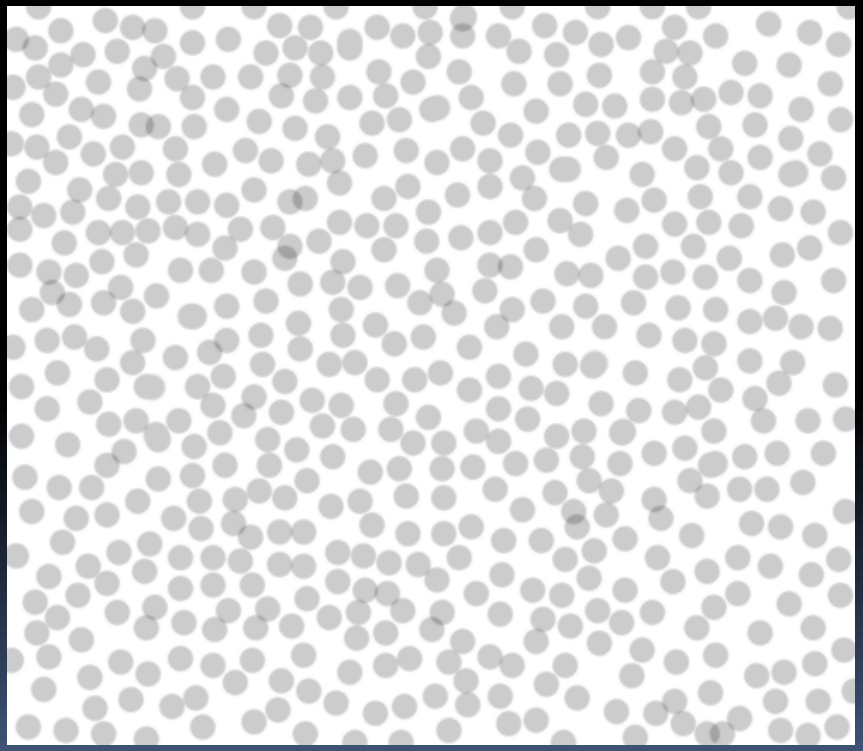
REVIEW

Holy Trinity of Photography

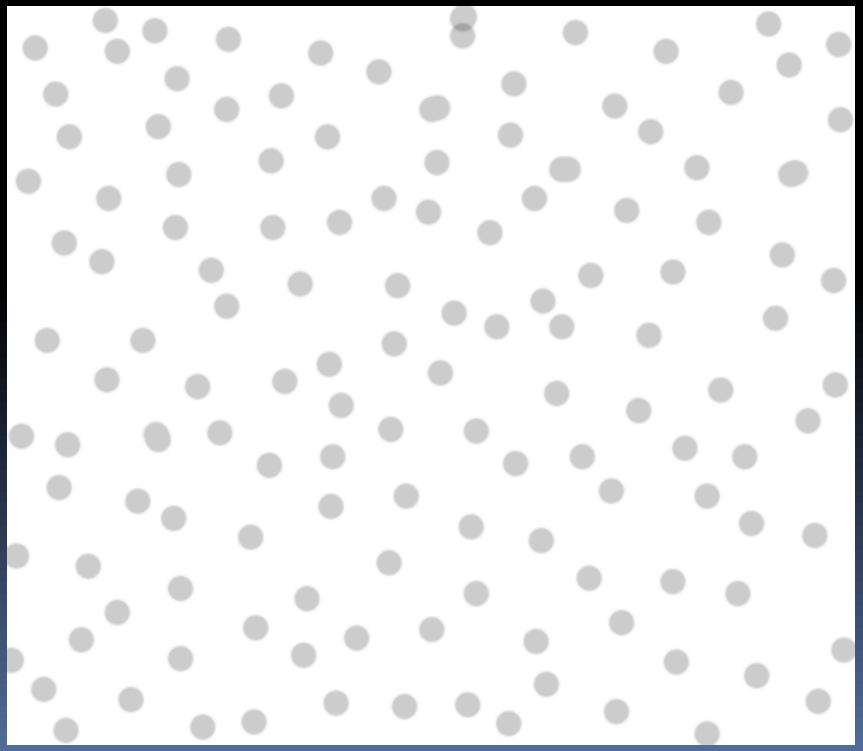


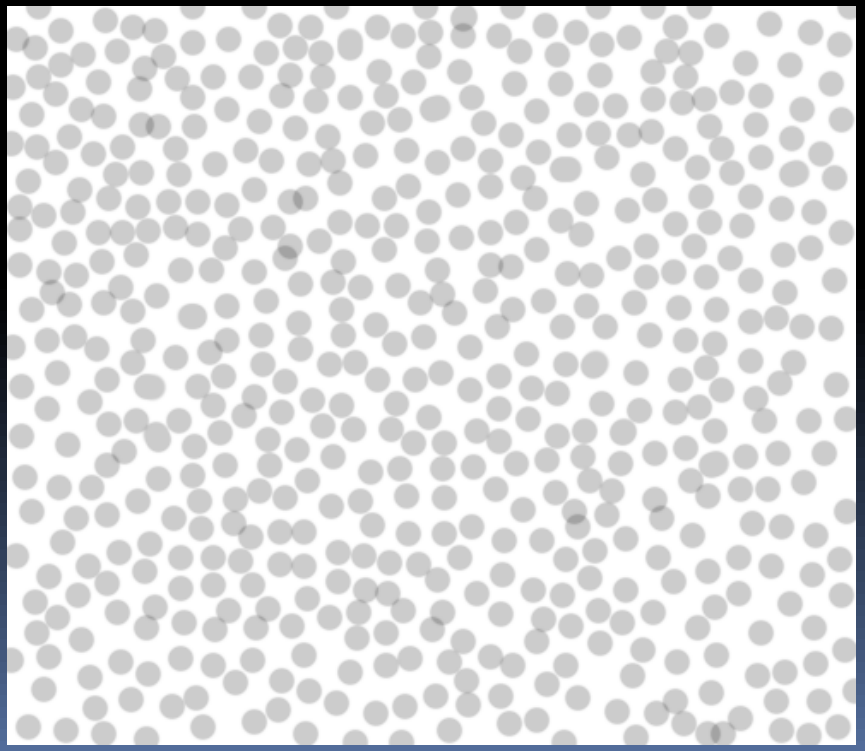
These are silver halides on film. Which has the lower ISO rating?





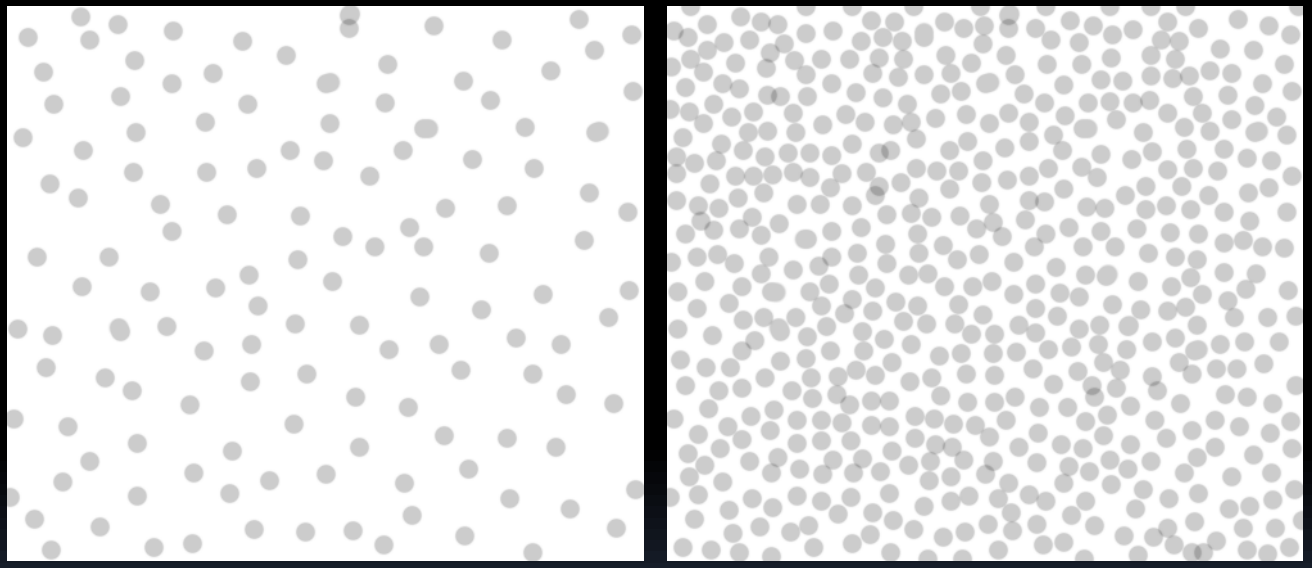
The one on the right – greater density means it takes more light to expose the entire image





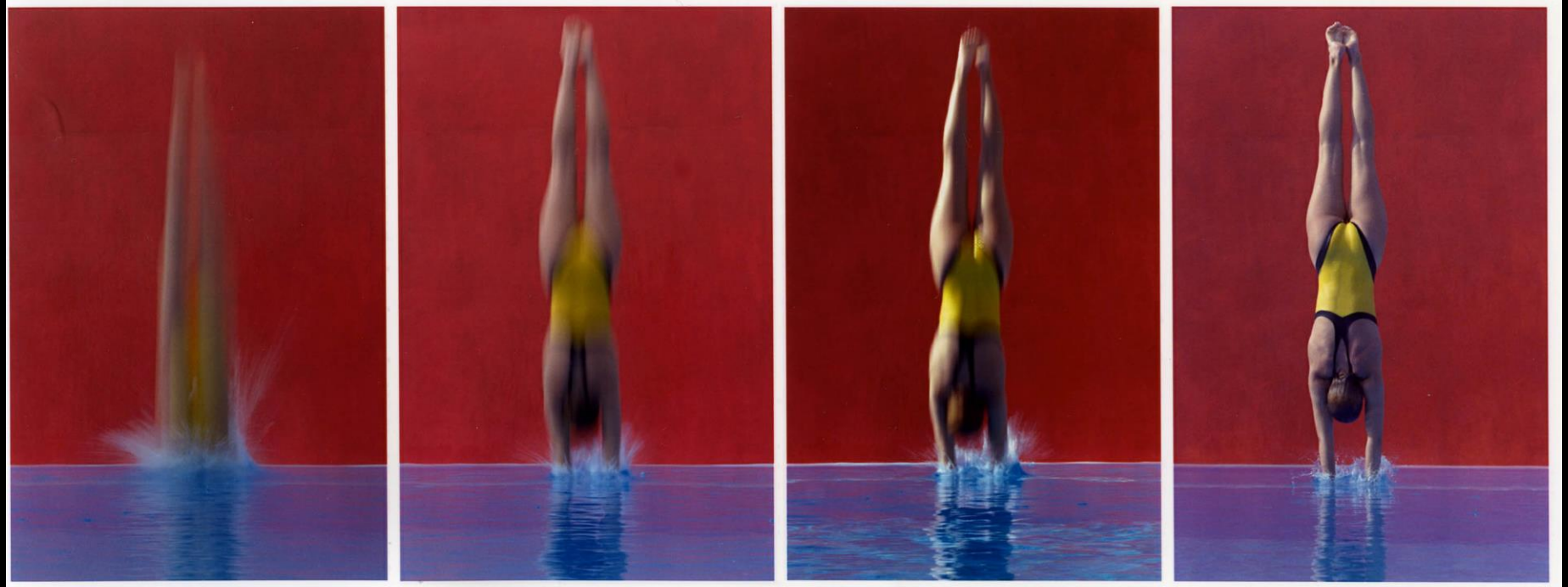
Low Density

High Density



Low Density

High Density



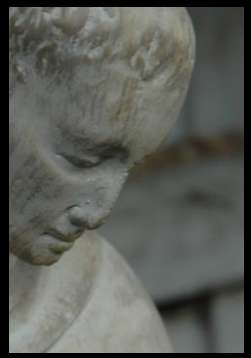
100 Speed Film

200 Speed Film

Kodak Max
Versatility Plus
400 Speed

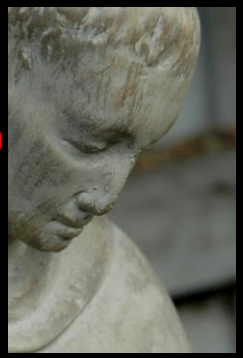
Kodak Max
Versatility Plus
800 Speed

Higher ISO allows for faster shutter speeds but noise can be created

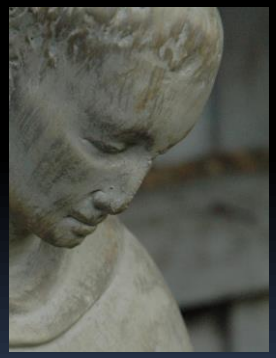


f/5 @ 1/60 (slow)
ISO 200 (lower number)

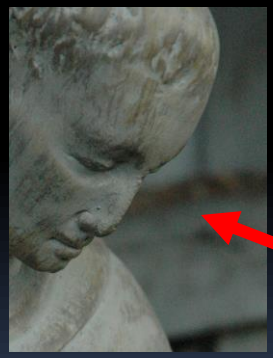
(aperture setting remains constant)



f/5 @ 1/80 (a little faster)
ISO 400 (a little higher)

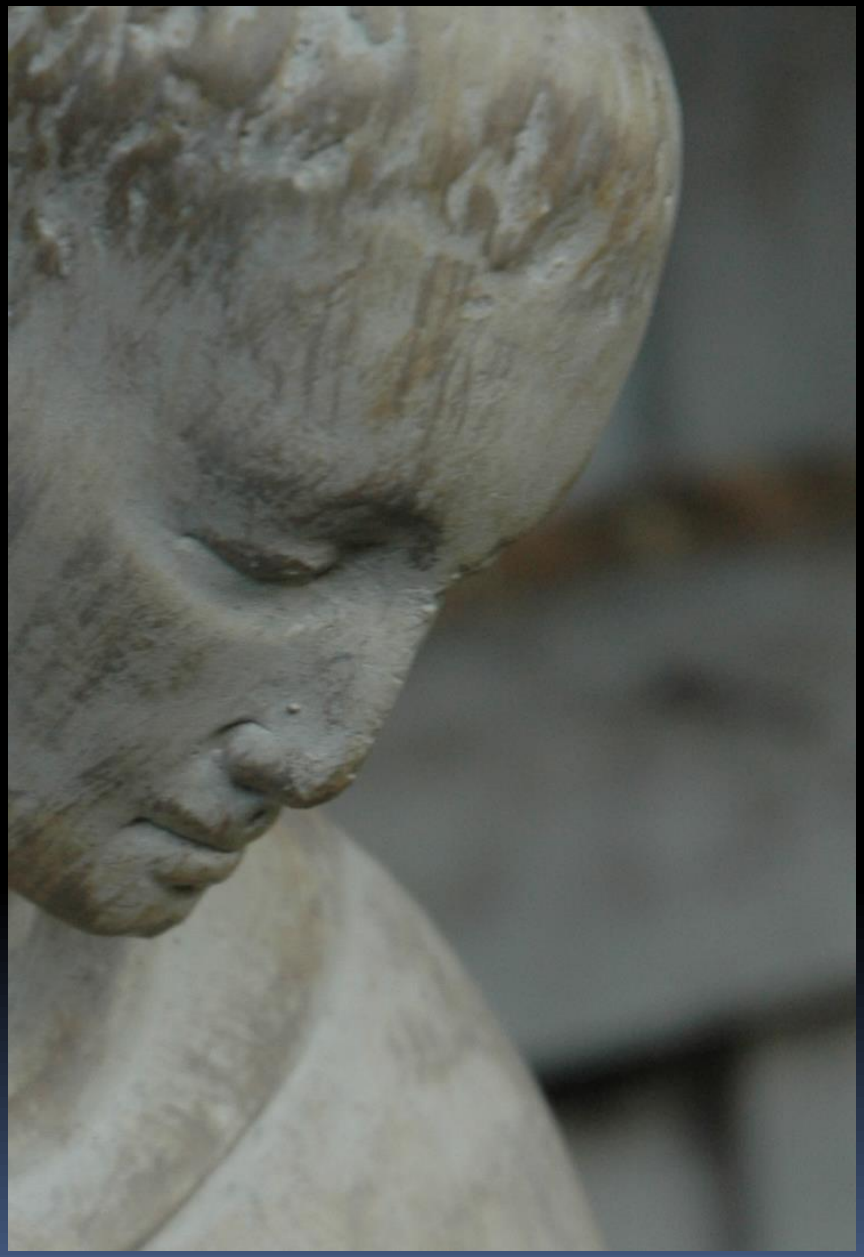


f/5 @ 1/200 (faster)
ISO 800 (higher)



f/5.0 @ 1/400 (quite fast)
ISO 1600 (much higher)

More noise present



200 ISO

1600 ISO

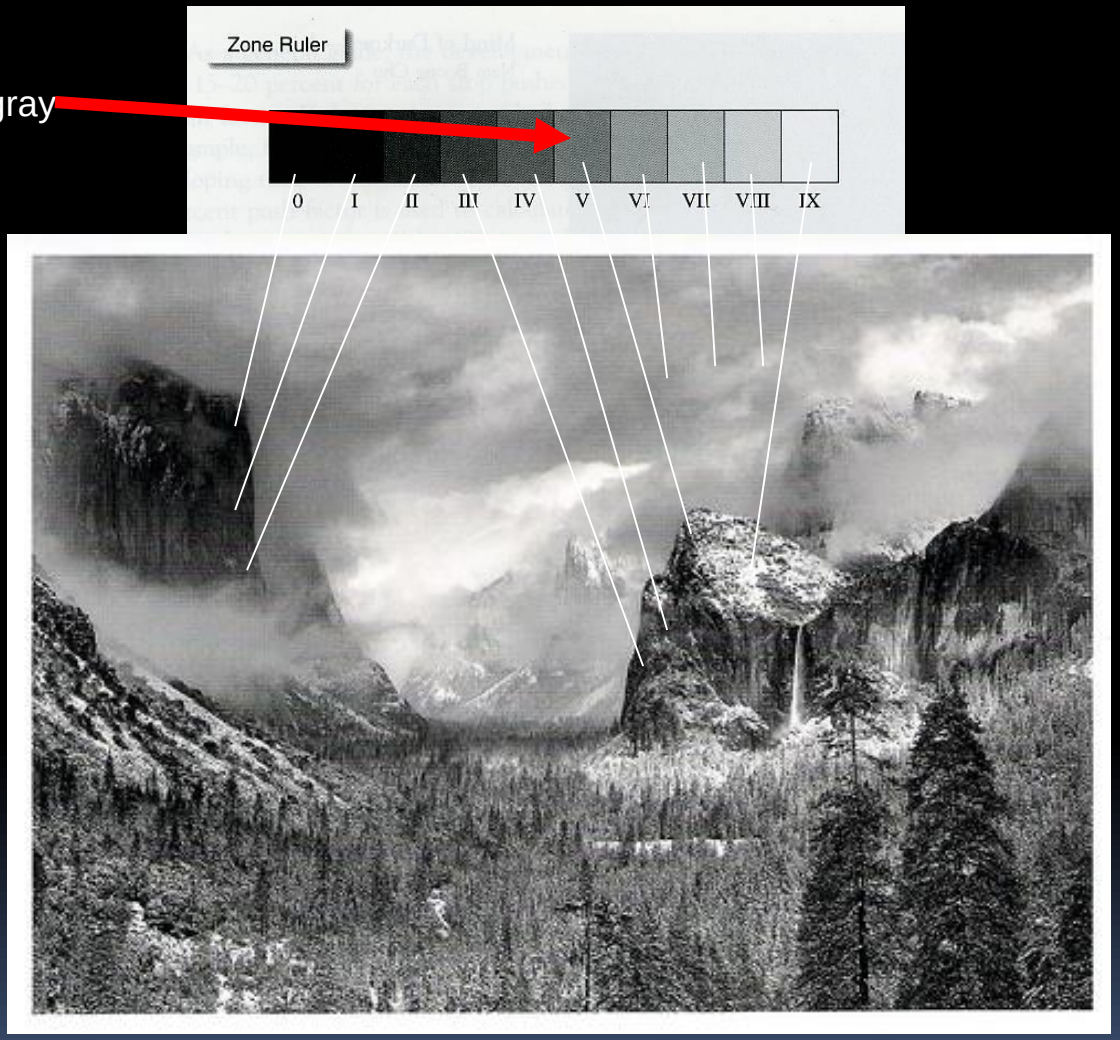
Light Meter

TO WHICH TONE DO ALL LIGHT METERS AVERAGE THE INCOMING LIGHT?

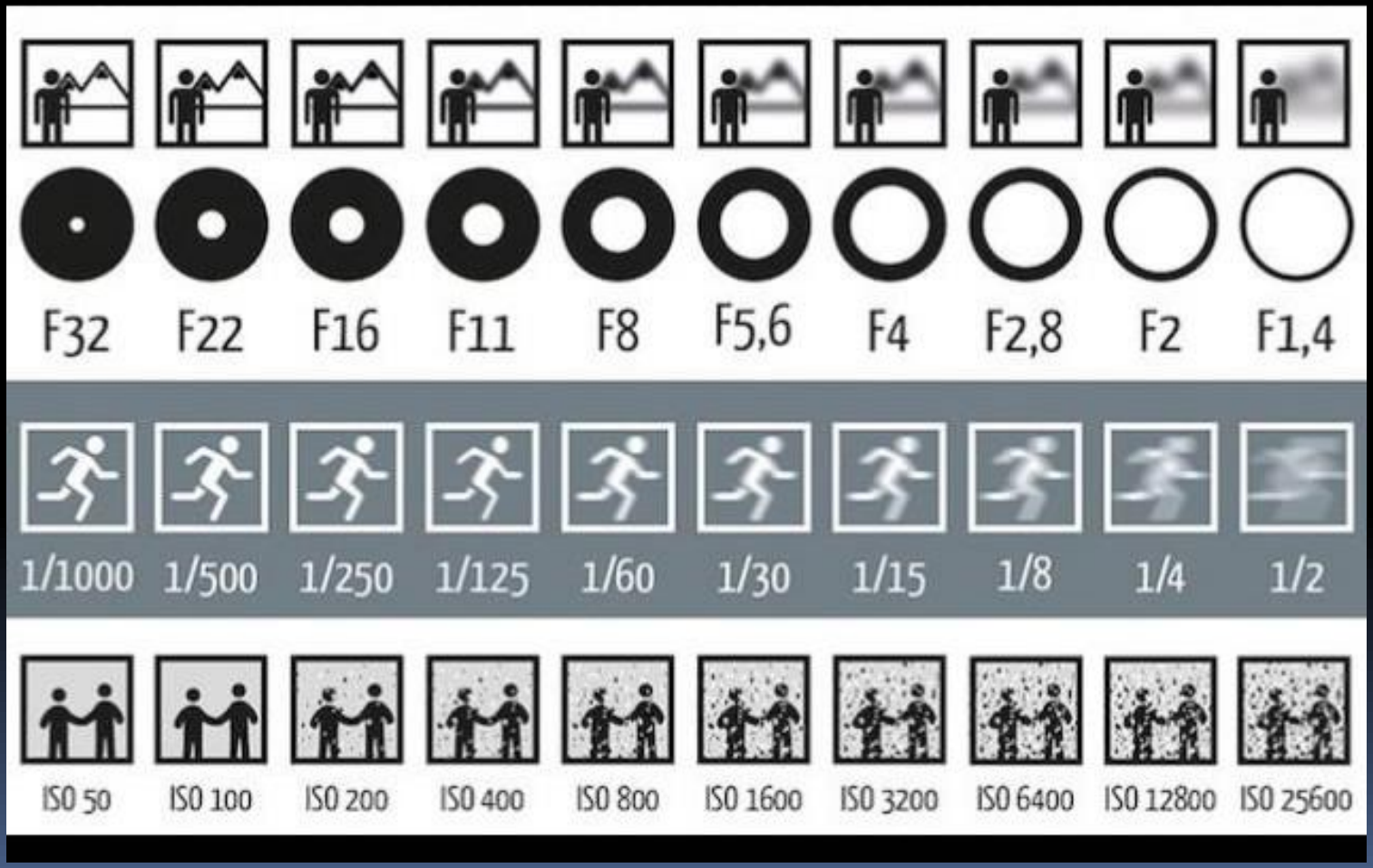
18% gray

- Tone to which all light meters average the light given off by the scene which is being photographed

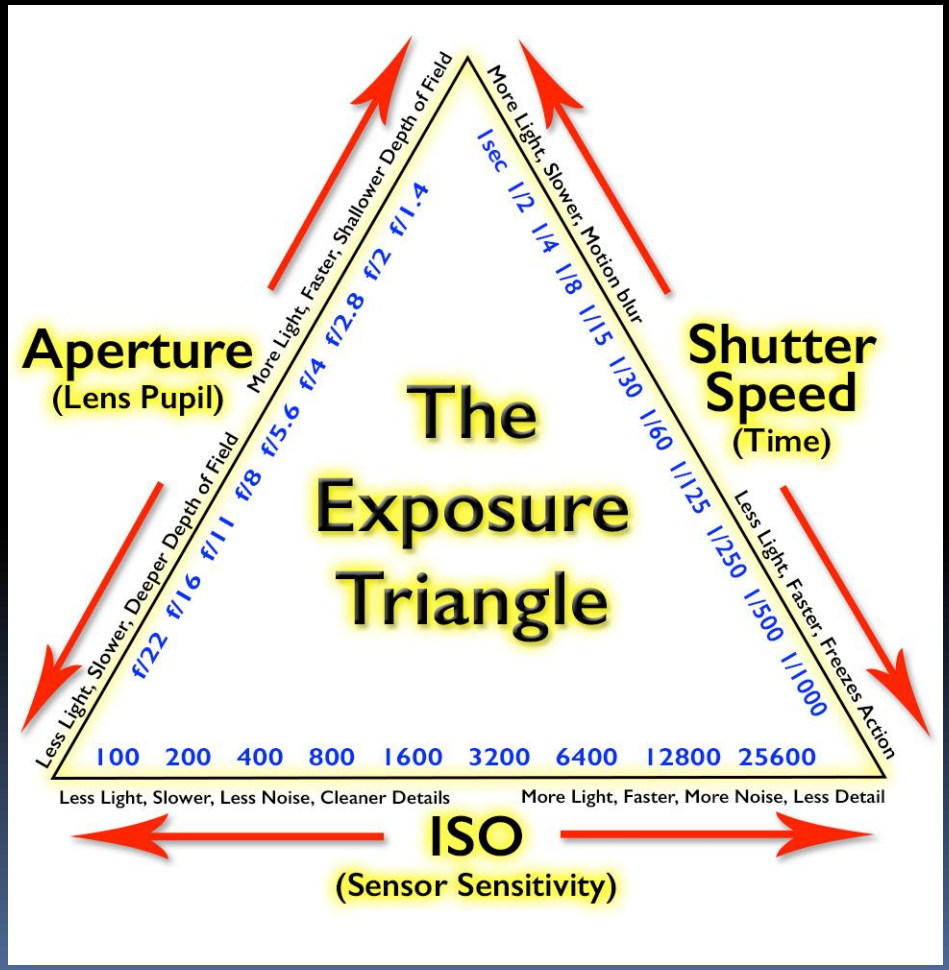
18% gray

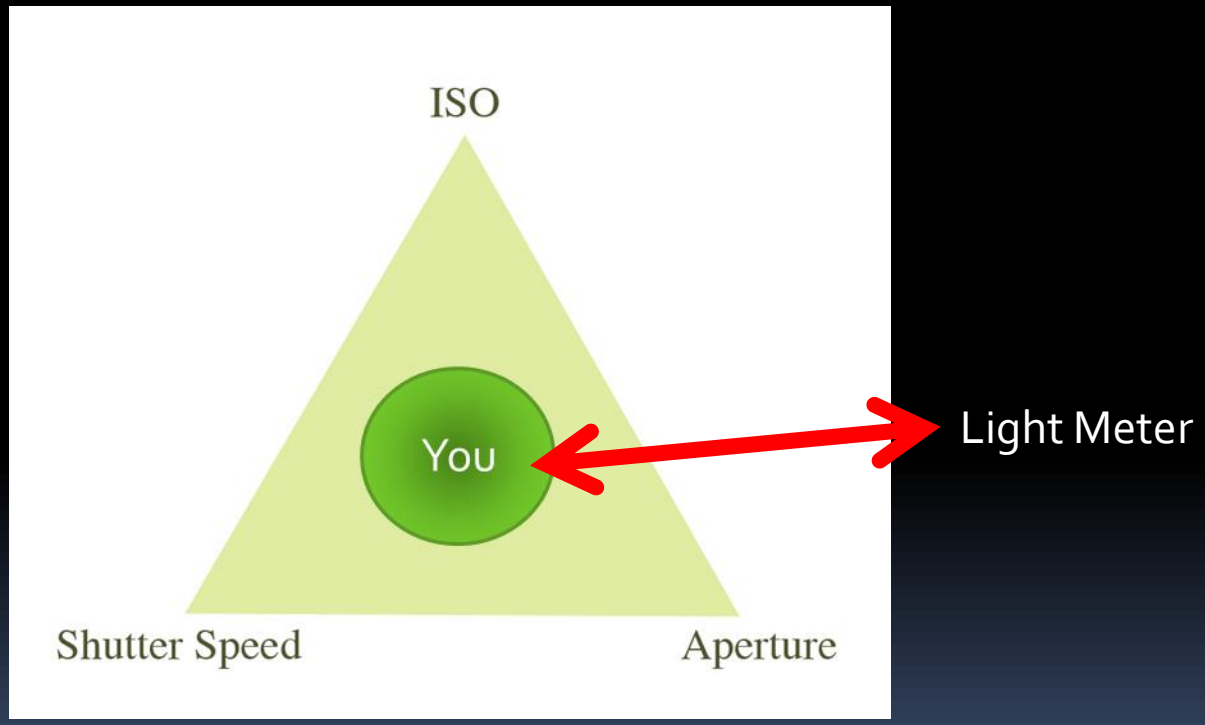


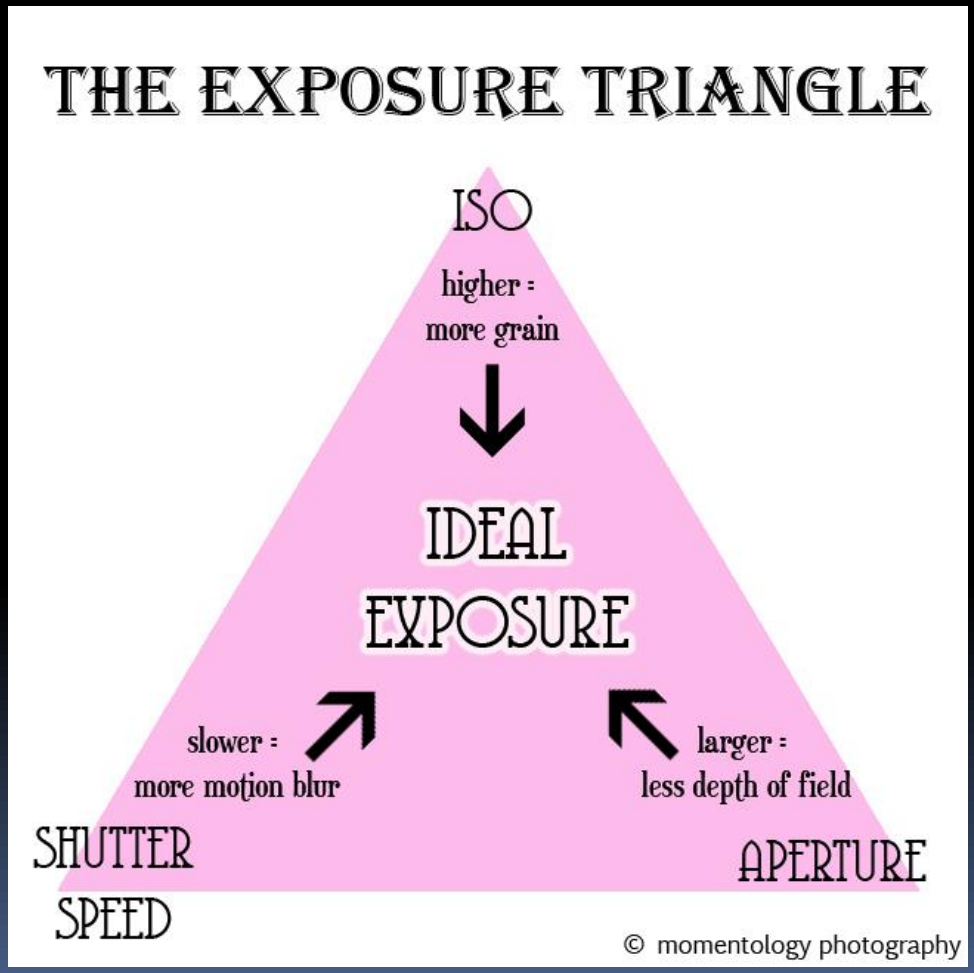
Three parts of the triangle

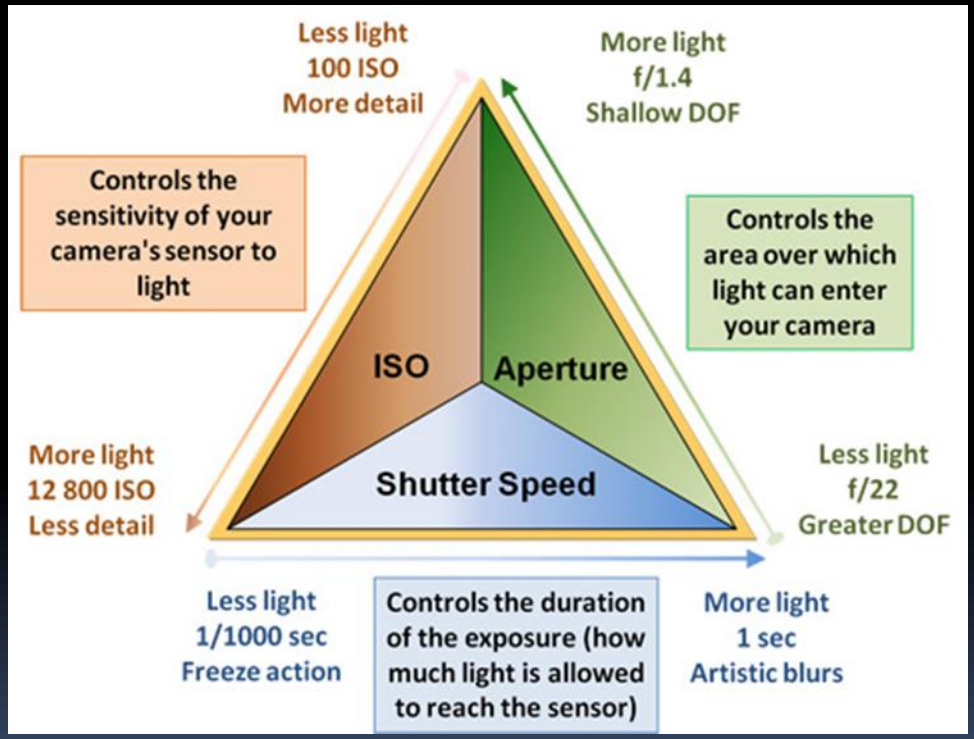


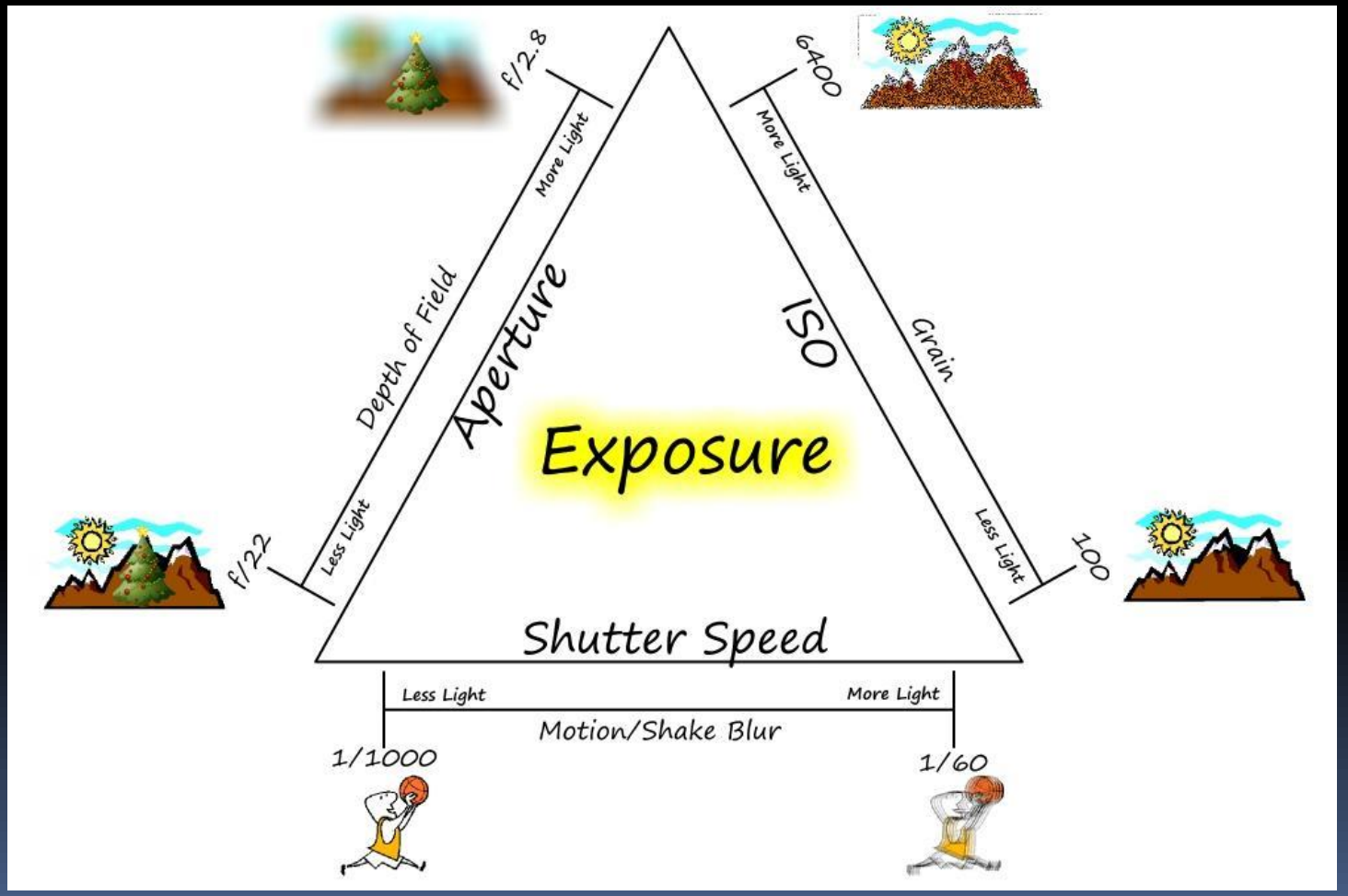
Holy Trinity of Photography




ISO
You
Light Meter
Shutter Speed
Aperture


THE EXPOSURE TRIANGLE
ISO
higher =
more grain
IDEAL
EXPOSURE
slower =
more motion blur
larger =
less depth of field
SHUTTER
SPEED
APERTURE
© momentology photography


Less light
100 ISO
More detail
More light
f/1.4
Shallow DOF
Controls the sensitivity of your camera's sensor to light
Controls the area over which light can enter your camera
ISO
Aperture
Shutter Speed
More light
12 800 ISO
Less detail
Less light
f/22
Greater DOF
Less light
1/1000 sec
Freeze action
Controls the duration of the exposure (how much light is allowed to reach the sensor)
More light
1 sec
Artistic blurs


f/2.8
6400
More Light
More Light
Depth of Field
Aperture
ISO
Grain
Exposure
Less Light
Less Light
f/22
100
Shutter Speed
Less Light
More Light
Motion/Shake Blur
1/1000
1/60

Technical Lesson

THE STOP, APERTURE, AND DEPTH OF FIELD

THE STOP

What is a Stop?

- A change in an exposure setting, either aperture, shutter speed, or ISO that either doubles or halves exposure

x2

or ½

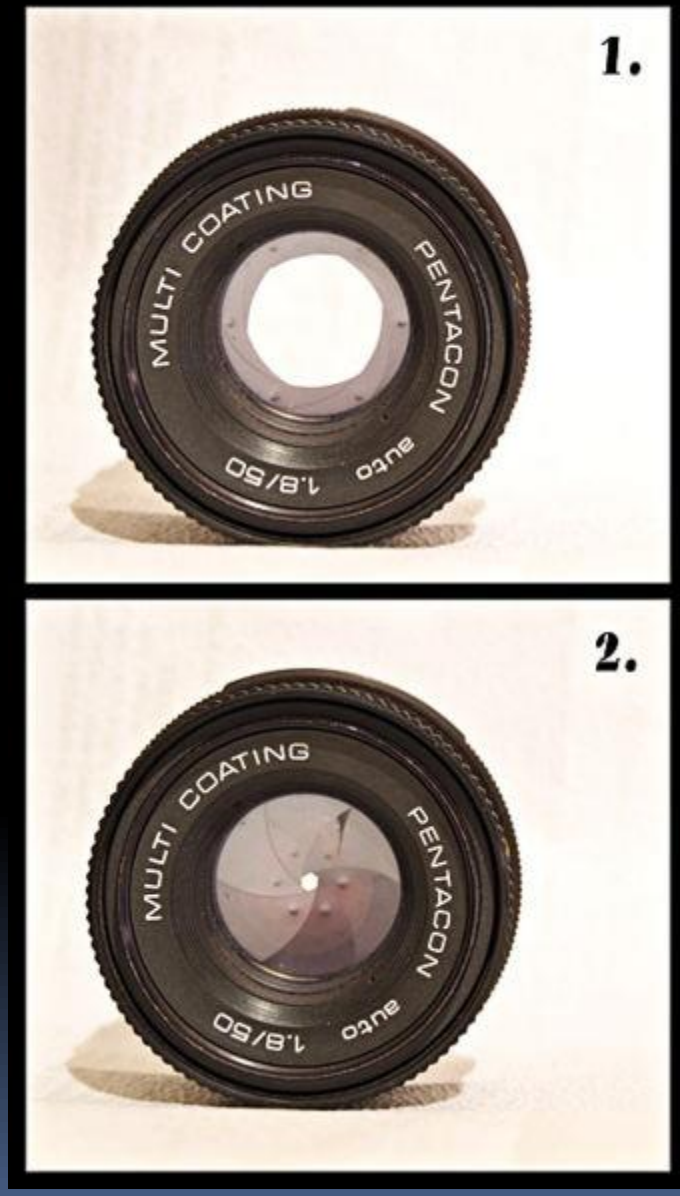
THE STOP AS IT RELATES TO APERTURE

Also known as the f-stop

Aperture

Controls opening's size during exposure

Another term for aperture: **f-stop**



WHY DOES A LARGER F-STOP NUMBER ACTUALLY REPRESENT A SMALLER APERTURE OPENING?

Higher numbers – smaller opening of the aperture?

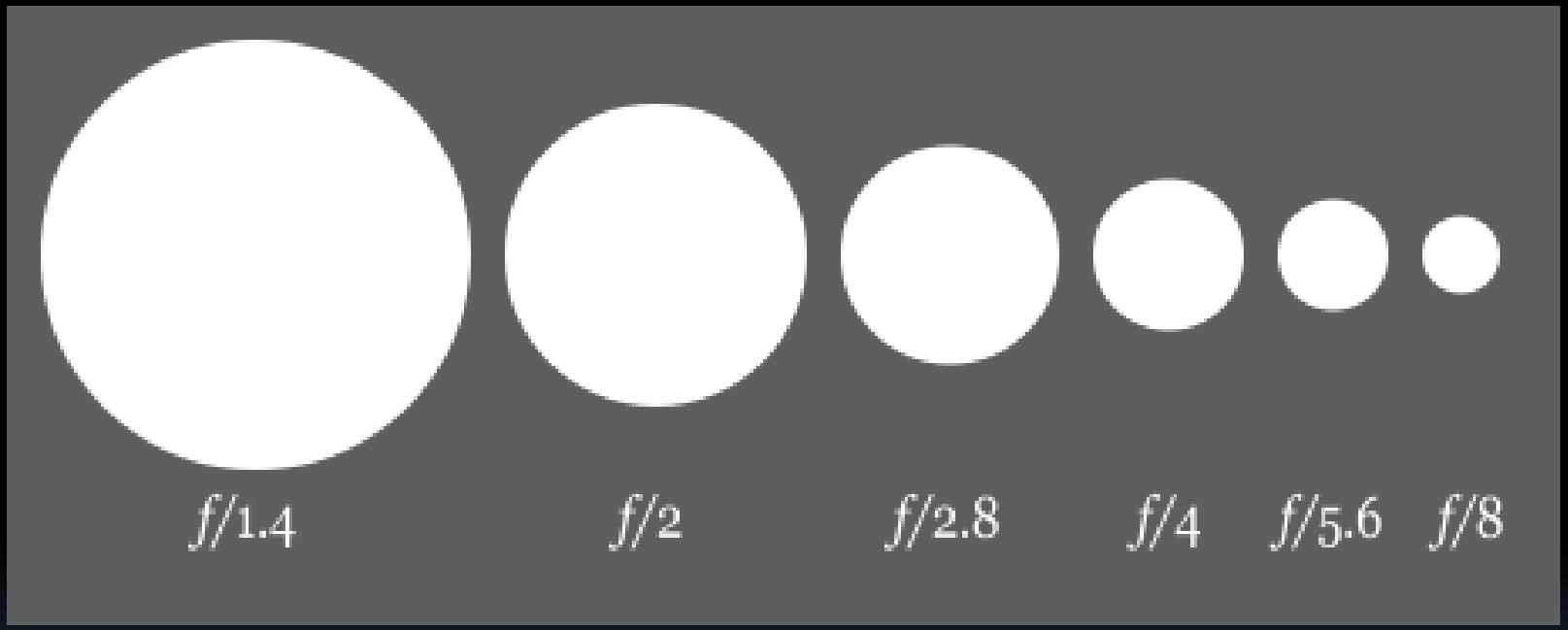
- F-stop numbers represent fractions
- The f-stop number represents the denominator
- For example

f/22 = 1/22

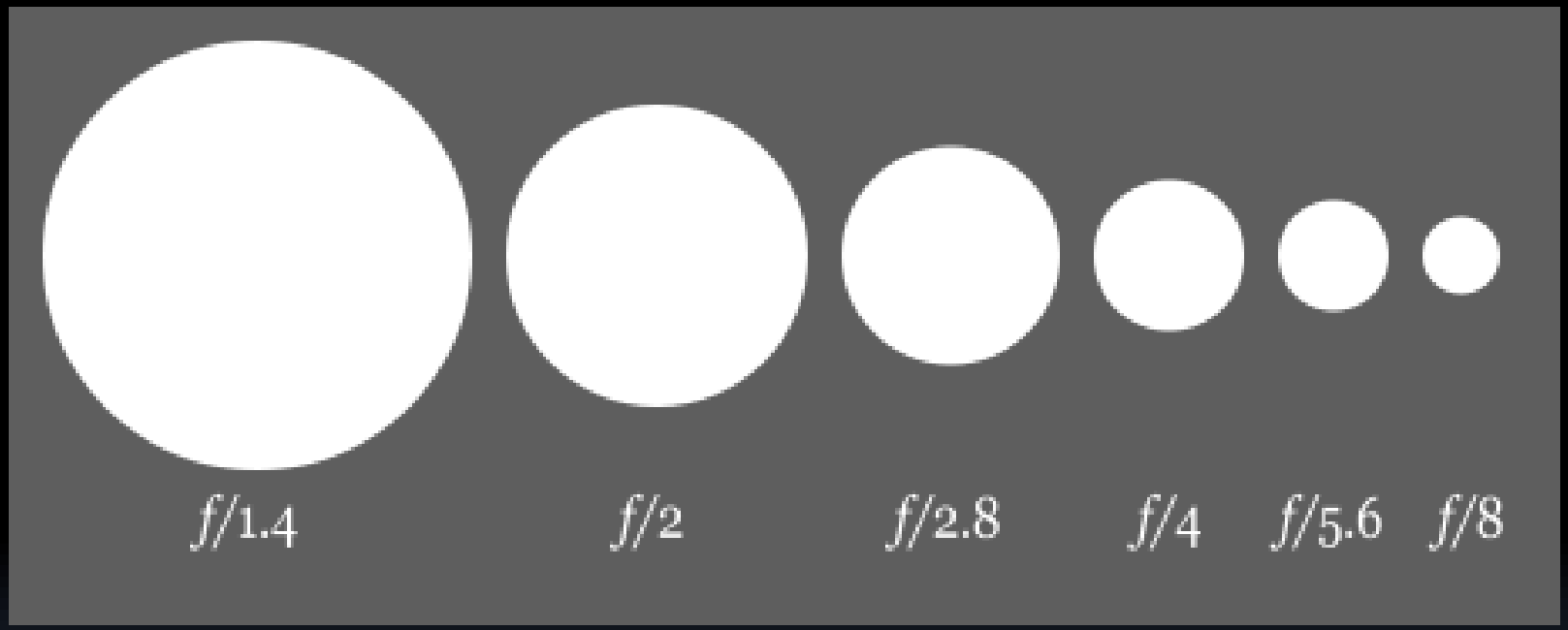
f/5.6 = 1/5.6

a STOP

Doubles or Halves


f/1.4
f/2
f/2.8
f/4
f/5.6
f/8

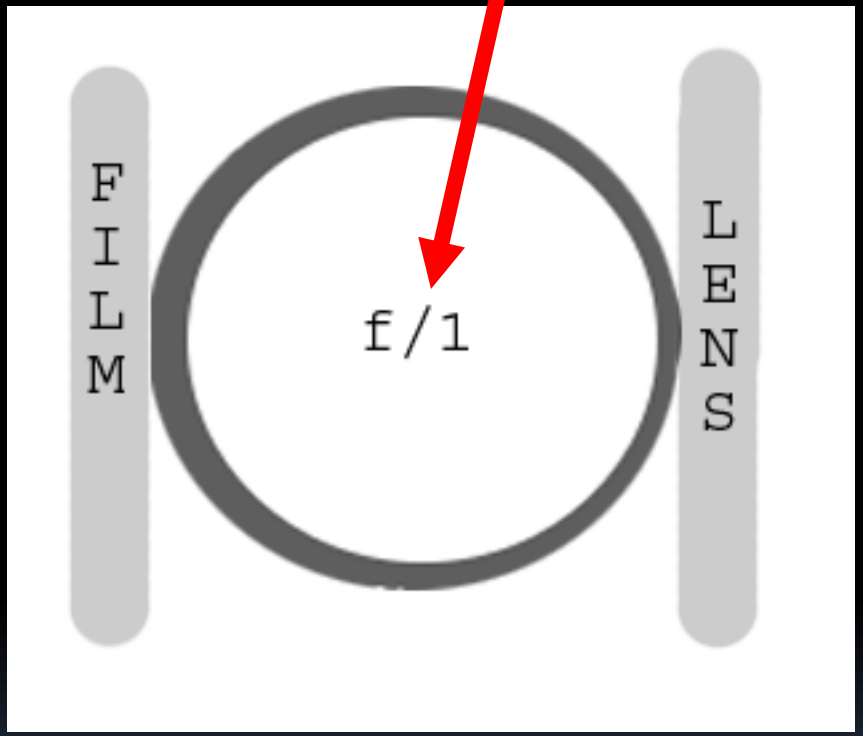
Light is halved this direction



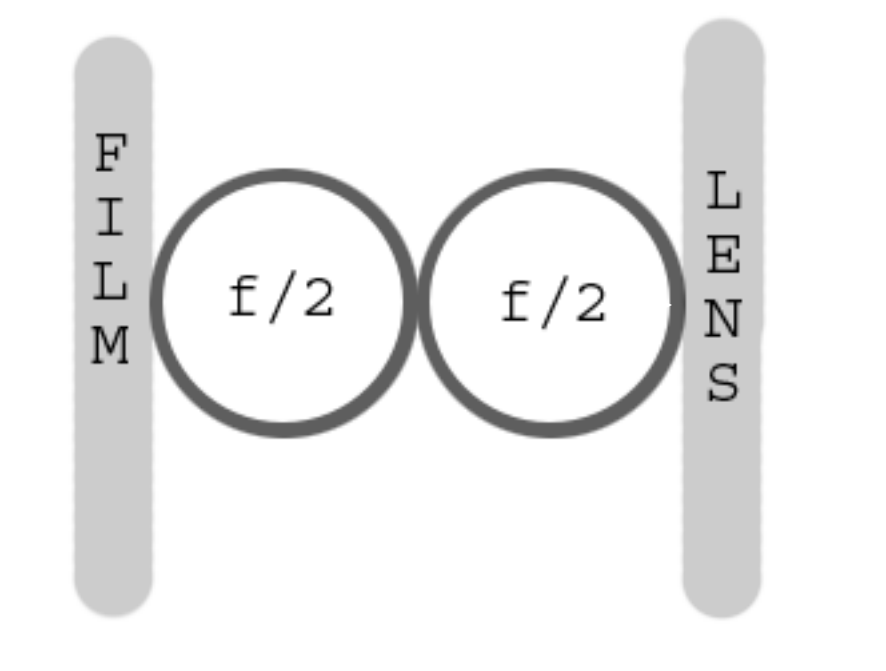
Light is doubled this direction

WHERE DO THESE STRANGE F-STOP NUMBERS COME FROM?

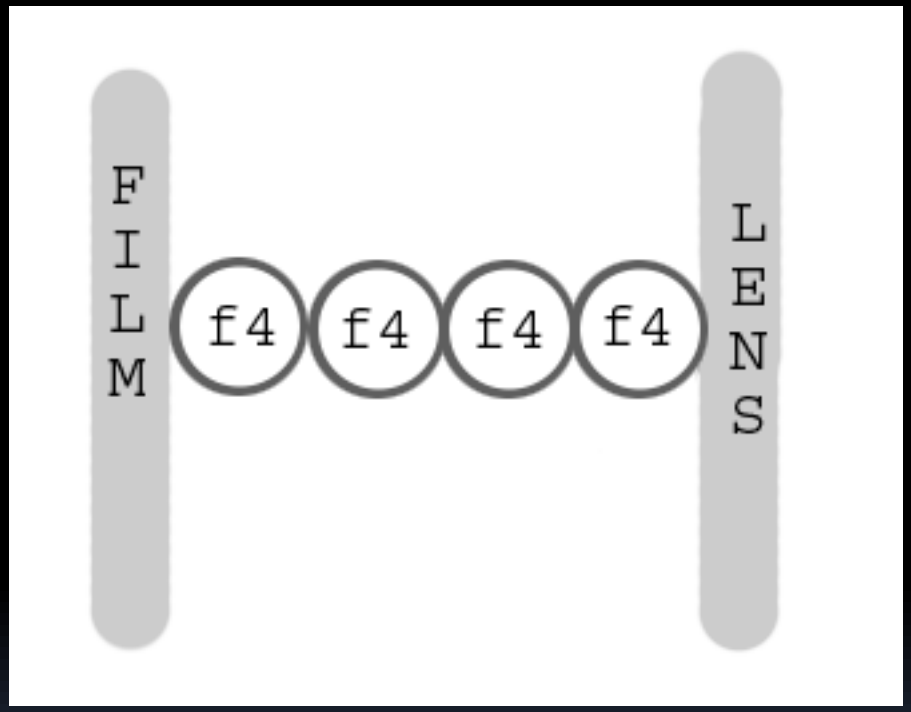
This diameter equates to diameter of aperture



Diameter is 1/1 the distance between film and back end of lens

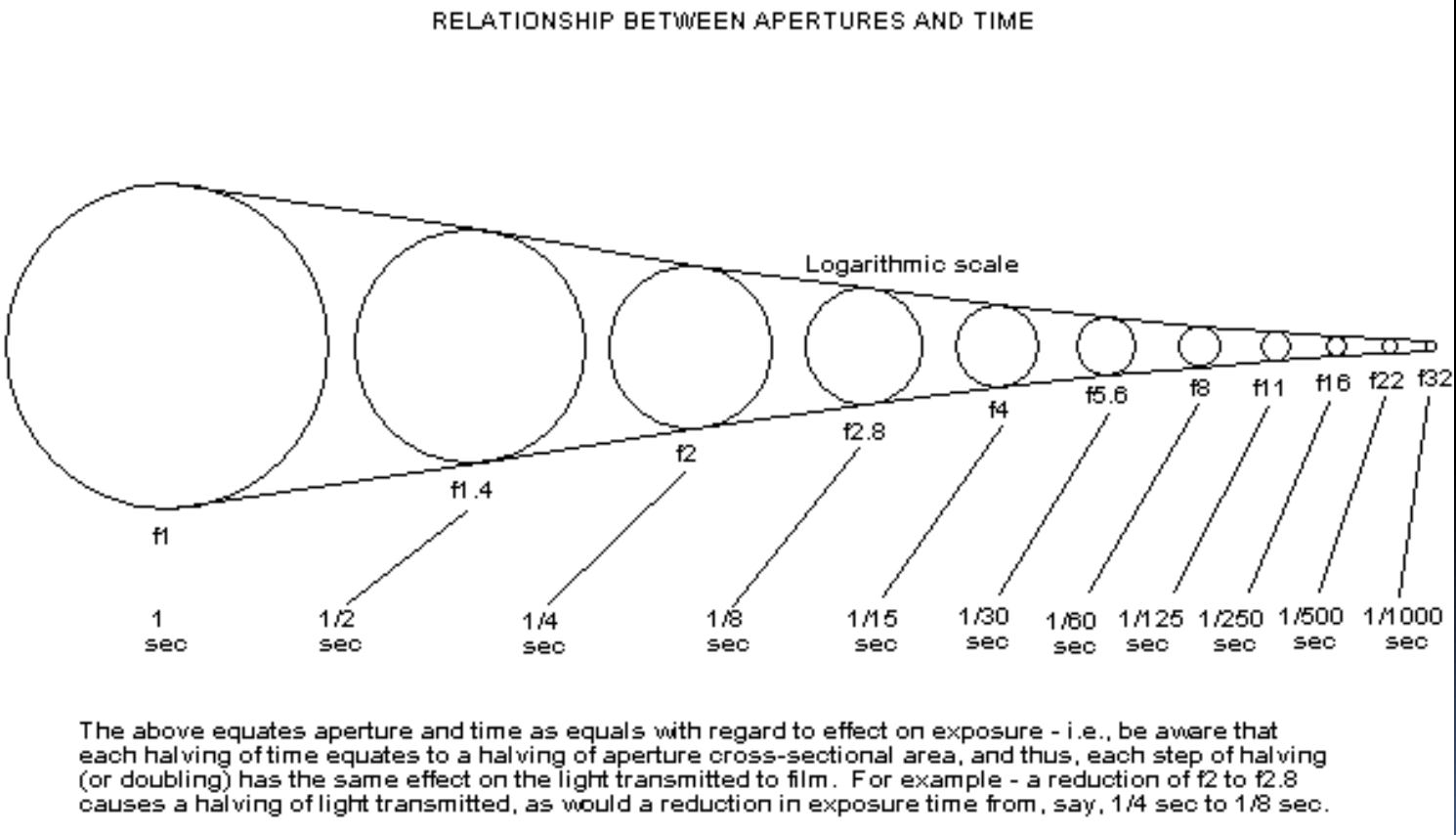


Diameter is 1/2 the distance between film and back end of lens



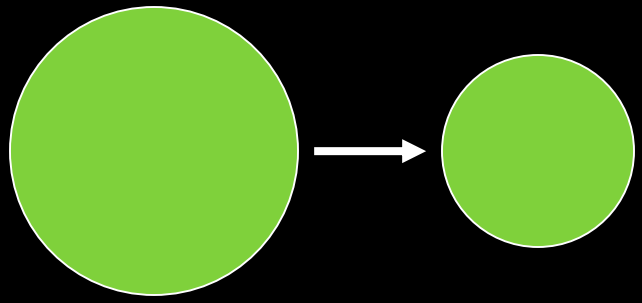
Diameter is 1/4 the distance between film and back end of lens

Numbers based on a Logarithmic Calculation



How Stops Work with the Aperture (f-stop)

f/4 to f/5.6 will cut light in half ½



f/16 to f/11 will double light x2

THE STOP AS IT RELATES TO SHUTTER SPEED

EACH FULL SHUTTER SPEED STOP

EITHER DOUBLES OR HALVES

THE AMOUNT OF LIGHT ENTERING THE CAMERA

How Stops Work with the Shutter Speed

1/125 to 1/250 cuts the amount of light in half ½

1/60 to 1/30 doubles the amount of light x2

WHY DOES A LARGER SHUTTER SPEED NUMBER REPRESENT A FASTER SHUTTER SPEED?

Doubling Comparison for Shutter Speeds

- Doubling Sequence
- 1
- 2
- 4
- 8
- 16
- 32
- 64
- 128
- 256
- 512
- 1024

- Camera Shutter Speeds
- 1
- 2
- 4
- 8
- 15
- 30
- 60
- 125
- 250
- 500
- 1000

Higher numbers mean faster shutter speeds?

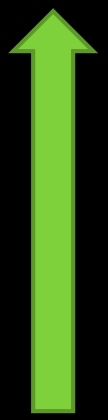
- Shutter speed numbers represent fractions as well
- The shutter speed number on your camera is the denominator
- For example

125 = 1/125 of a second

1000 = 1/1000 of a second

THE STOP AS IT RELATES TO ISO

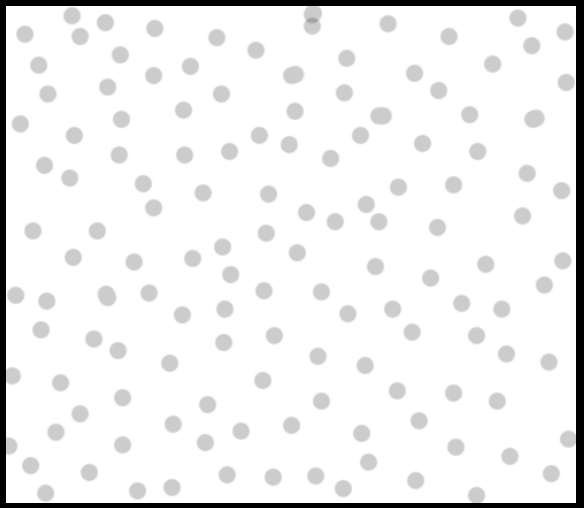
Amount Of Light		ISO
More light needed to expose properly	Less grain present	100
		200
		400
		800
		1600
		3200
		6400
		12800
Less light needed to expose properly	More grain present	25600



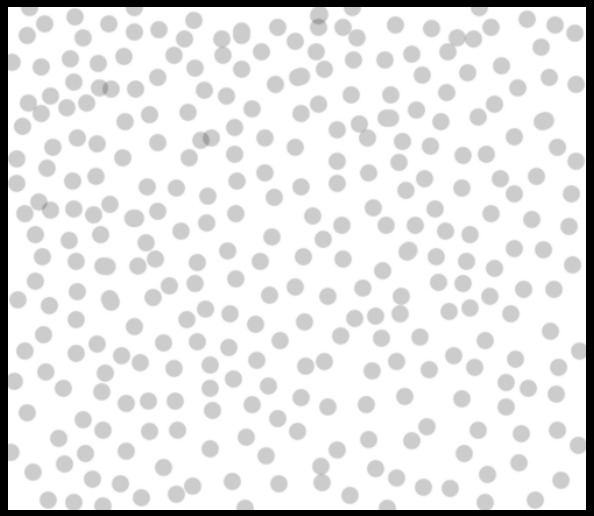
Amount light needed to make correct exposure doubles each stop

Amount light needed to make correct exposure halves each stop

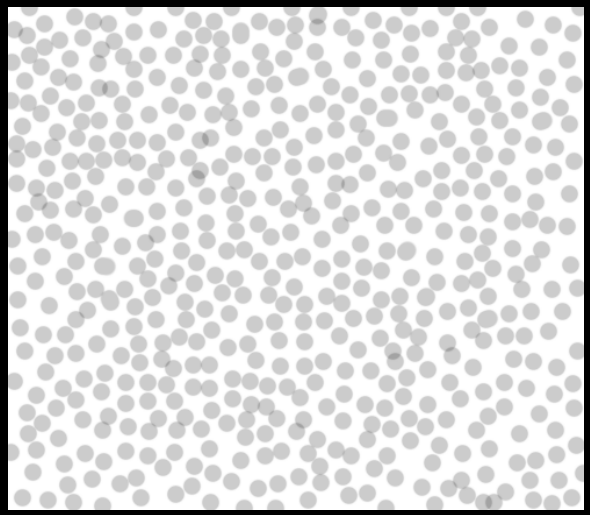
800 ISO



400 ISO



100 ISO



Twice as much light needed each for each stop

Half as much light needed each for each stop

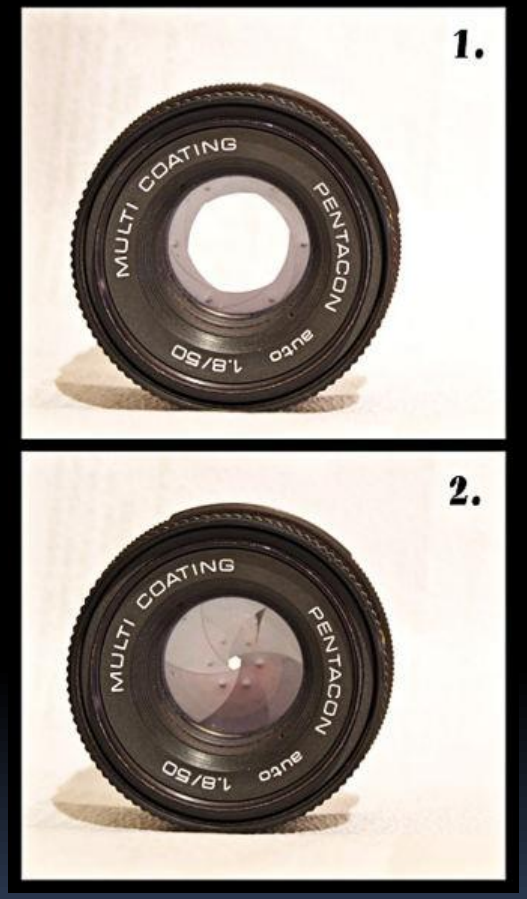
APERTURE AND DEPTH OF FIELD

Aperture

Controls opening's size during exposure

Another term for aperture: **f-stop**

Controls Depth of Field

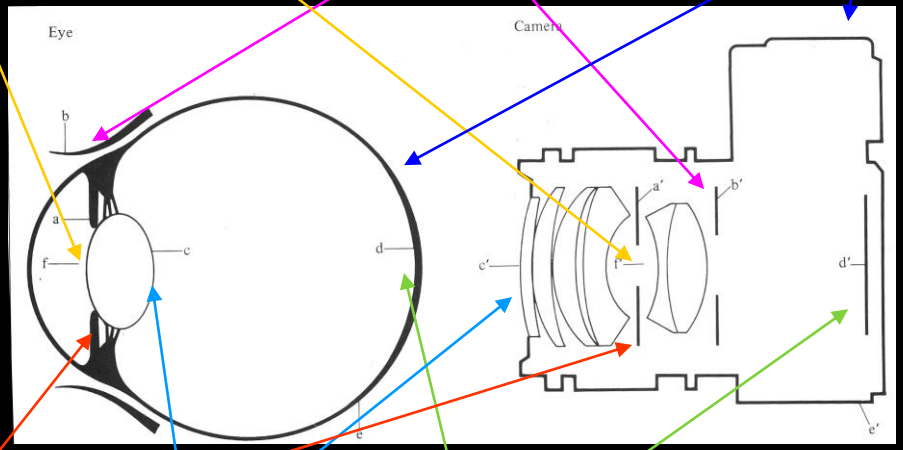


The Camera/Eye Comparison

Aperture = Pupil

Shutter = Eyelashes

Camera body = Eyeball



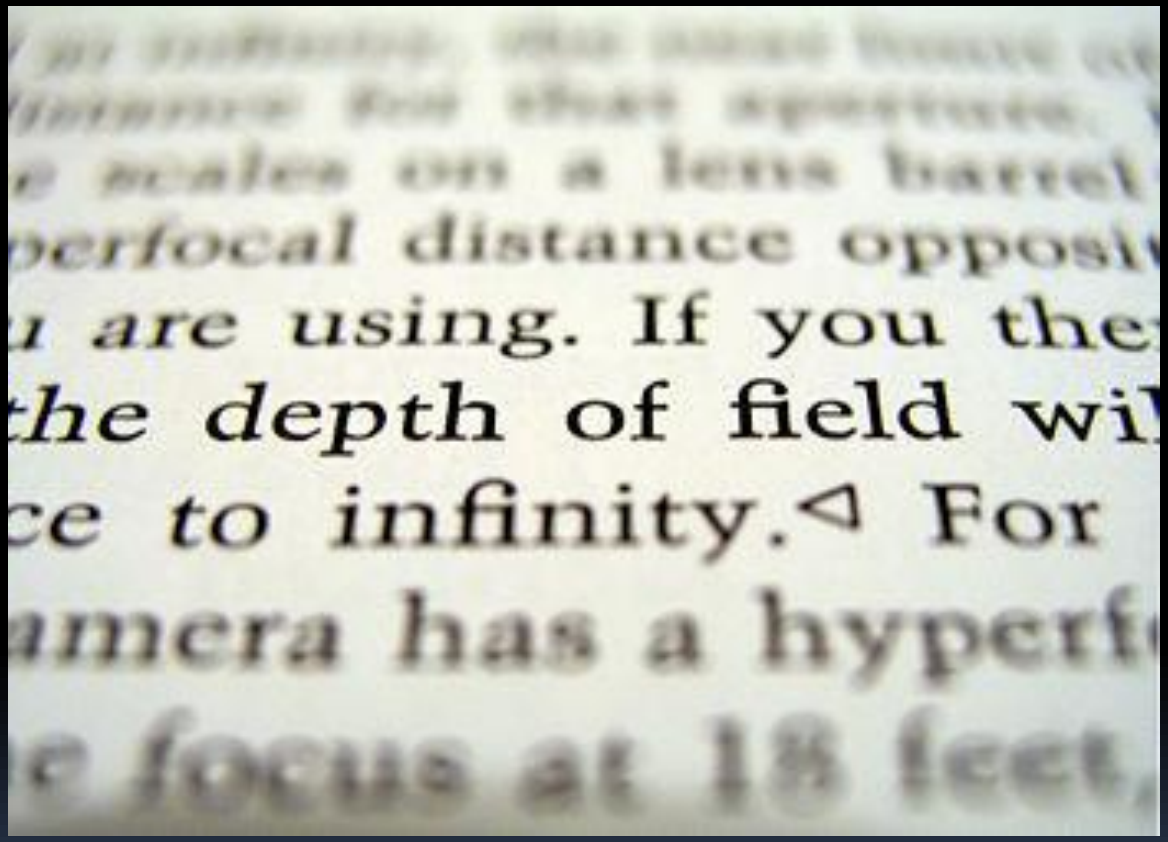
Iris diaphragm = Iris

Lens

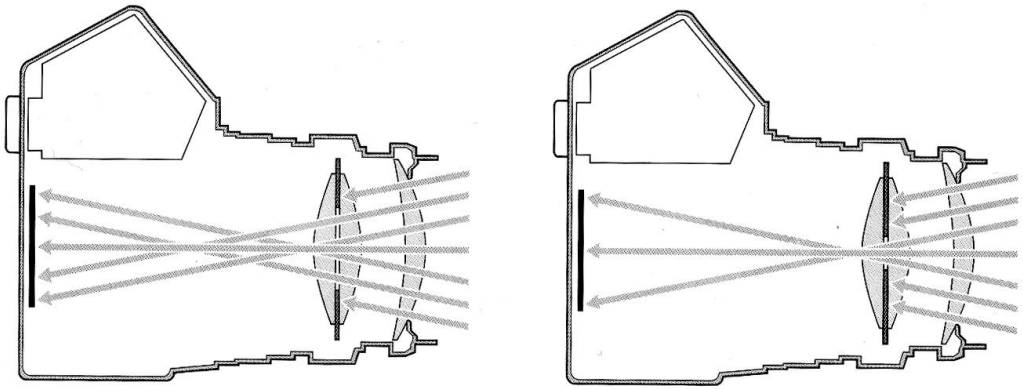
Film = Light sensitive retina

Depth of Field

- The zone of sharpness variable by aperture, focal length, or subject distance

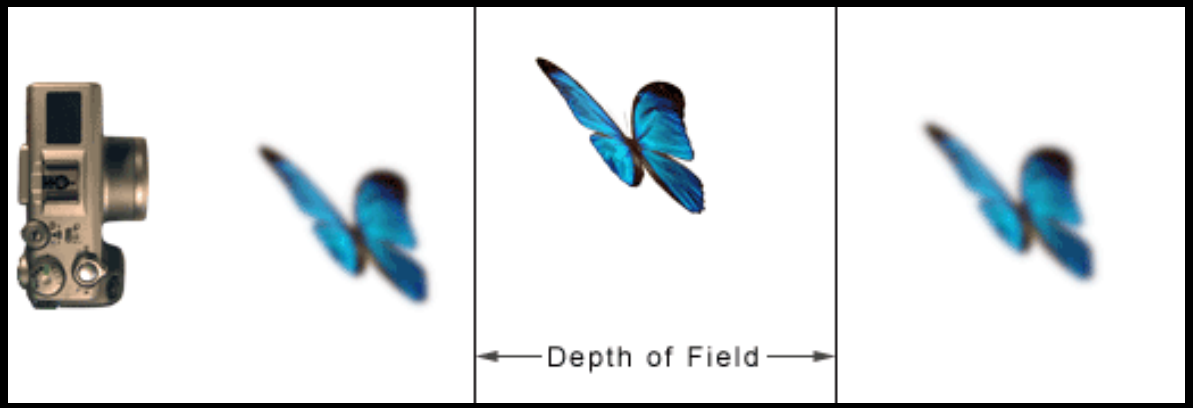

scales on a lens barrel
perfocal distance opposite
are using. If you the
the depth of field will
ce to infinity. For
amera has a hyperfo
focus at 18 feet,

Aperture and Scattered Light Rays



Wide Aperture

Small Aperture


Depth of Field

f/22

f/8

f/4

f/2

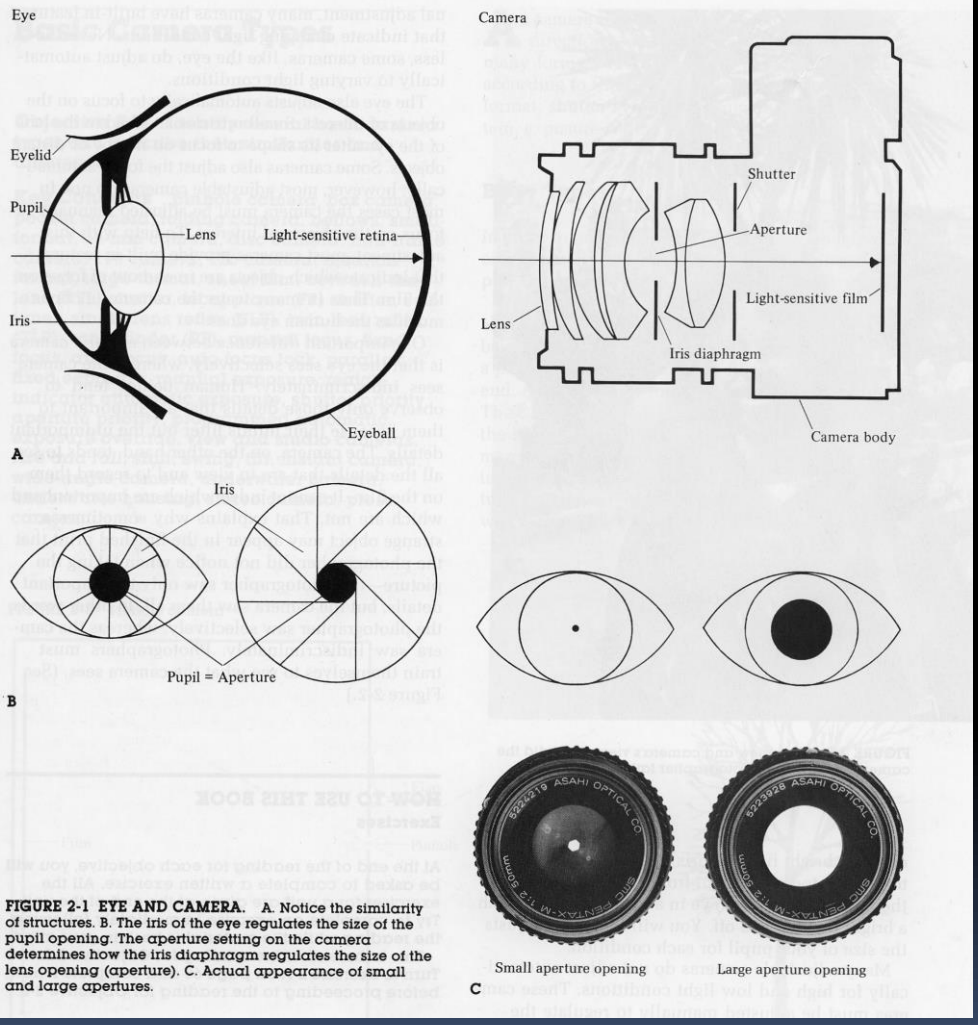
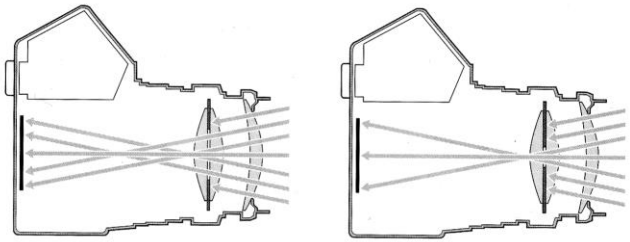


FIGURE 2-1 EYE AND CAMERA. A. Notice the similarity of structures. B. The iris of the eye regulates the size of the pupil opening. The aperture setting on the camera determines how the iris diaphragm regulates the size of the lens opening (aperture). C. Actual appearance of small and large apertures.

Aperture and Scattered Light Rays



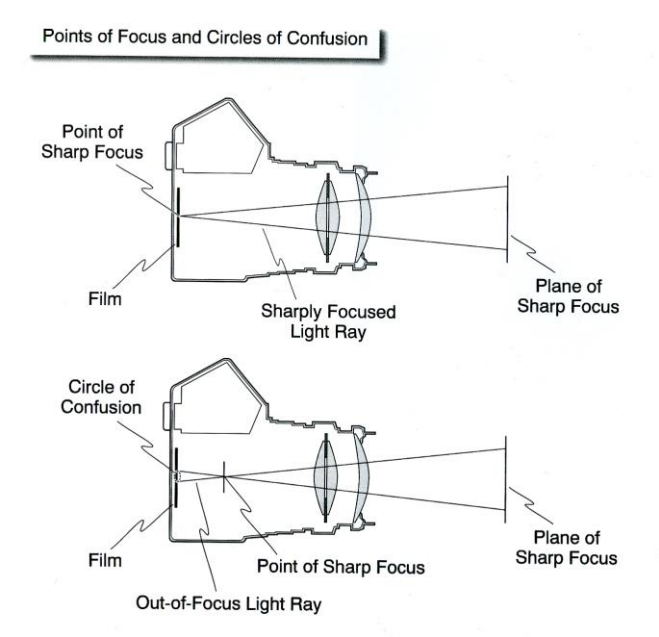
Wide Aperture

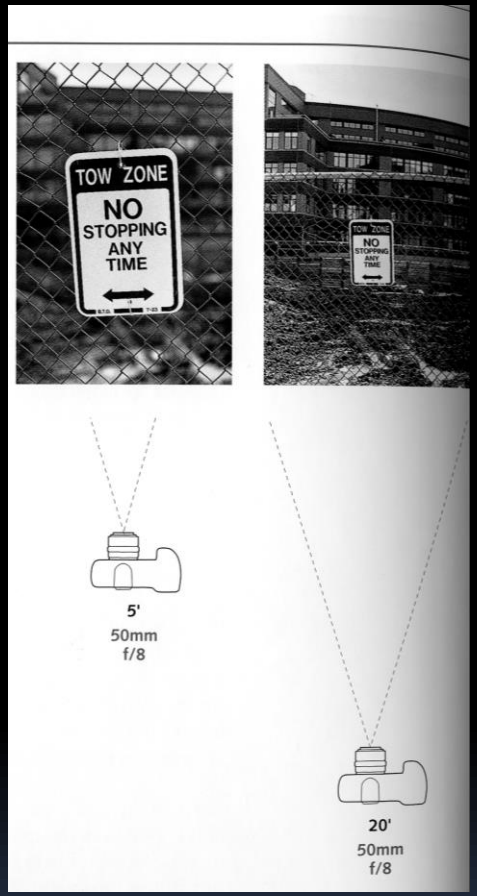
Small Aperture

Depth-of-Field Factors

f/2
50mm
2' away

f/22
50mm
2' away


Points of Focus and Circles of Confusion
Point of Sharp Focus
Film
Sharply Focused Light Ray
Plane of Sharp Focus
Circle of Confusion
Film
Point of Sharp Focus
Out-of-Focus Light Ray
Plane of Sharp Focus


TOW ZONE
NO STOPPING ANY TIME
5'
50mm
f/8
20'
50mm
f/8

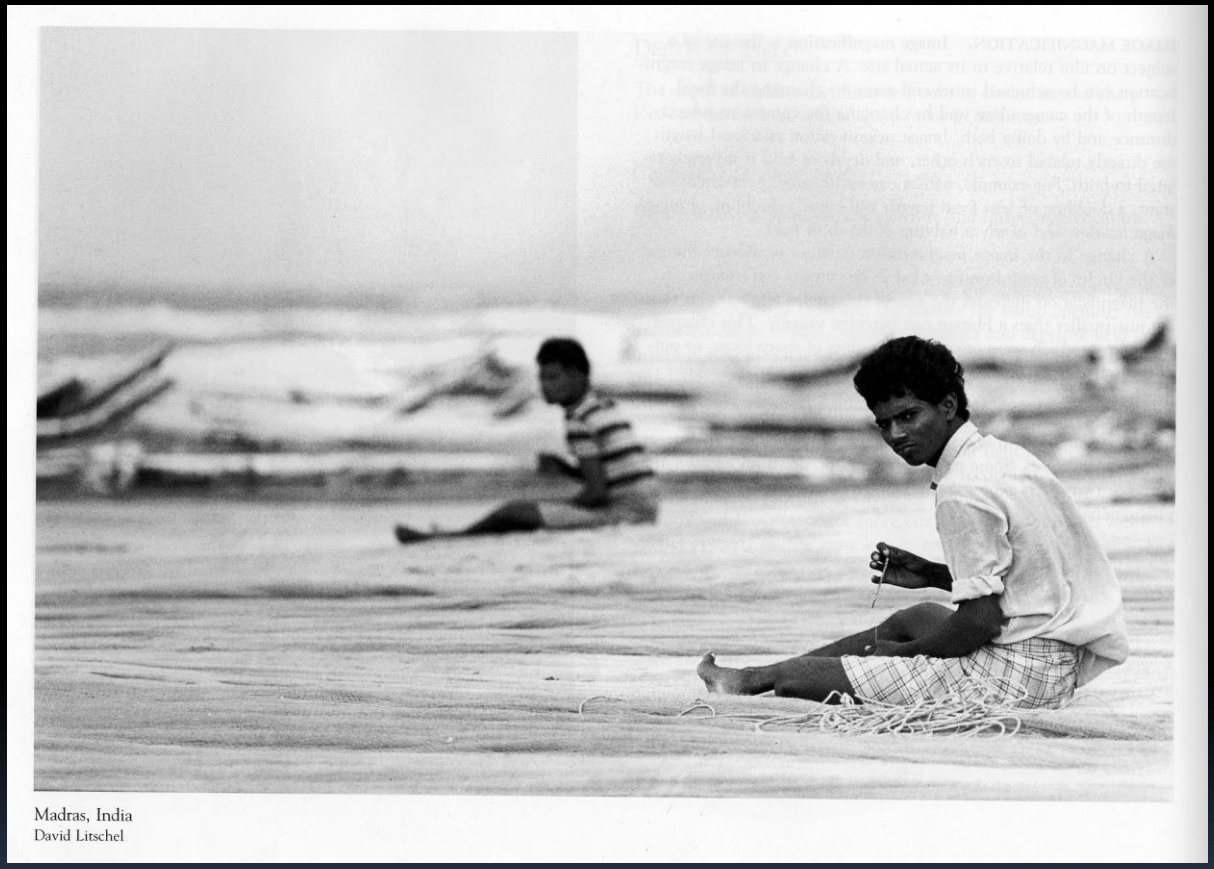
Large Depth of Field

Shot at f/64

Ansel Adams

Shallow Depth of Field

Keely Nagel



Madras, India
David Litschel

Shot at f/2.8

Bokeh

Ryan Phillips

The term comes from the Japanese word *boke* (暈け or ボケ), which means "blur" or "haze", or *boke-aji* (ボケ味), the "blur quality"

Shot at f/22

Shot at f/1.8 exact same location

Depth of Field – can make a fence disappear

f/22

f/1.8

Composition Lesson

PORTRAIT AND BEST LIGHT USE

Objectives of Portrait Shoot

- Eyes are in **focus**
- Shoot in GOOD LIGHT – ***Open Shade*** or ***Overcast Day***
- Vary your shots between ***Portrait*** and ***Landscape*** Orientation
- Shallow ***Depth of Field***
- ***Avoid Mergers***

YOU CAN SHOOT A PHOTO OF SOMETHING BEAUTIFUL (LIKE A CHILD) IN BAD LIGHT AND THE PHOTO TURNS OUT BADLY.

YOU CAN SHOOT A PHOTO OF SOMETHING UGLY (LIKE A GRAFFITI) IN GOOD LIGHT AND THE PHOTO TURNS OUT BEAUTIFULLY.

Beautiful subject, harsh light

Ugly subject, beautiful light

“GOOD” Light

- When sunny outside, shoot in ***Open Shade***
- **Overcast** days are the best light conditions for most photography
- Shoot **10 minutes before sunrise** or

  10 minutes after sunrise

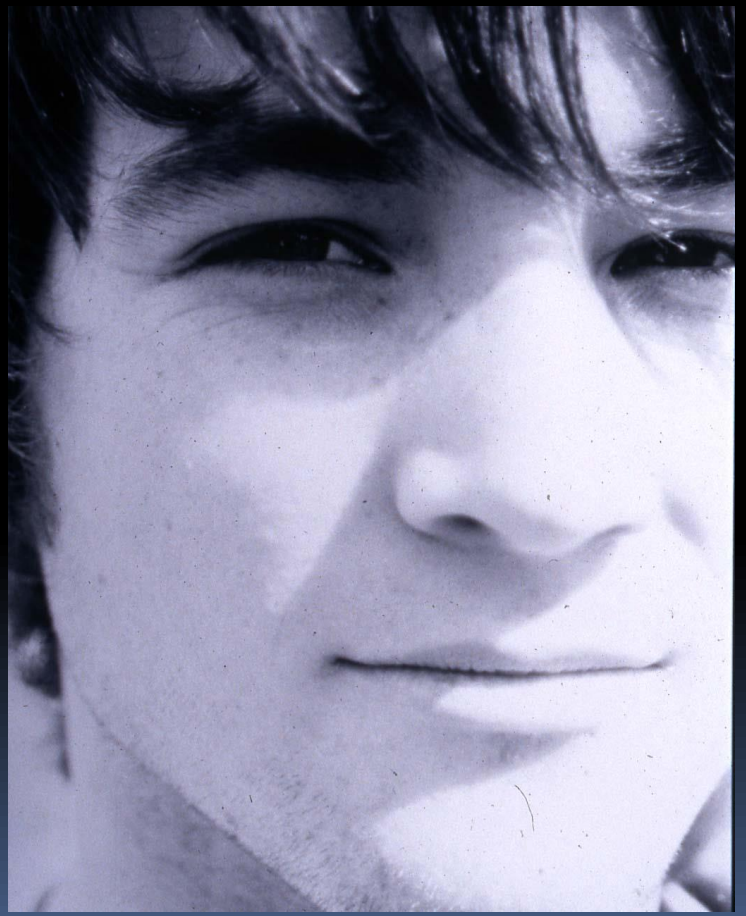
What is Open Shade?

Master Painting by Eric Lindroth

What does open shade or a cloudy day do?

- It diffuses light
- There are no harsh shadows cast on the face

“Good” Light vs. “Bad” Light



Background inclusion

- To include a background (environment) or not

Little to no background

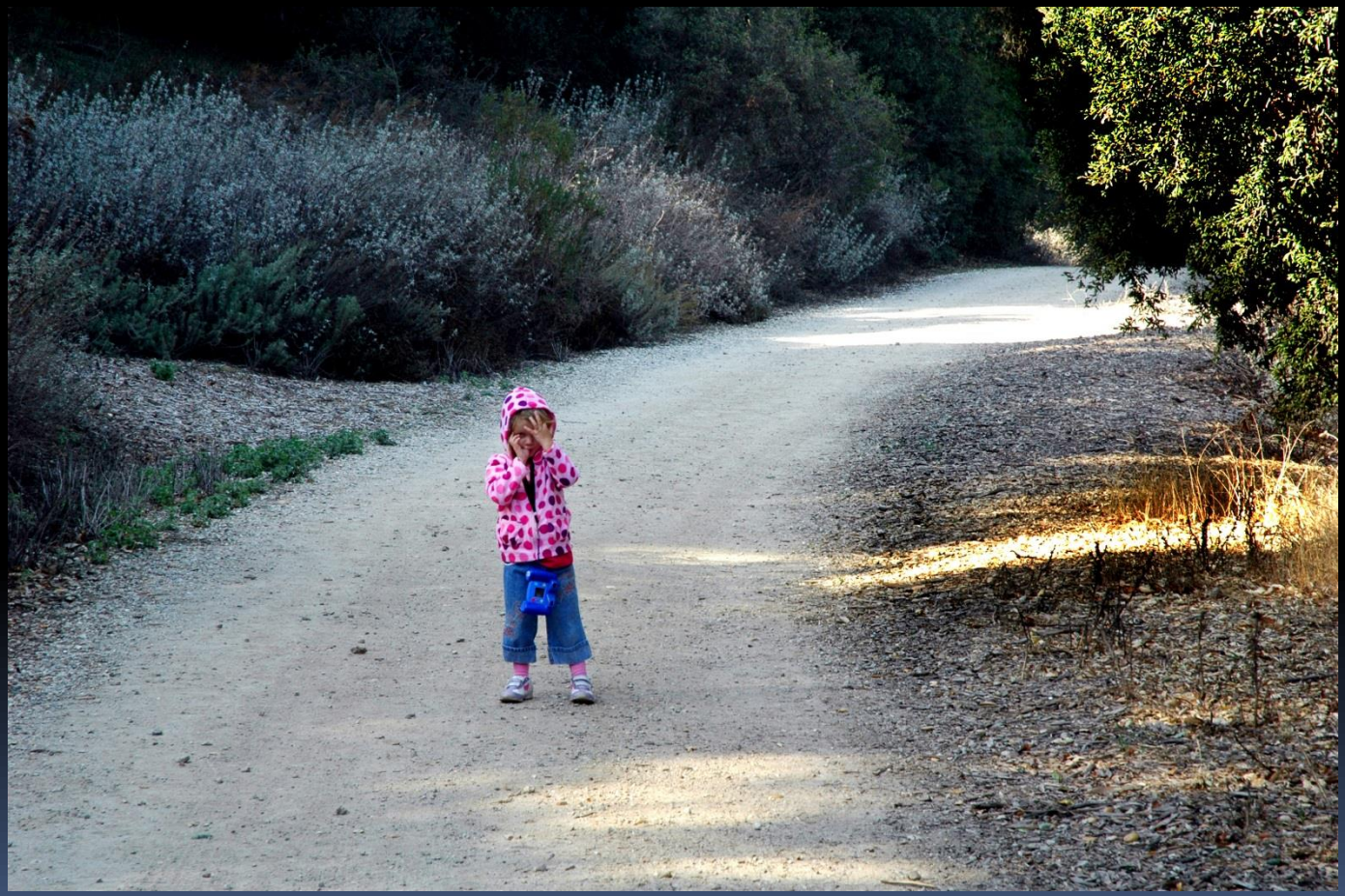
Environmental Portrait

Background

Environmental

Background minimized

Environmental



Format: Horizontal or Vertical

Portrait and Landscape Orientation

Portrait Orientation

Landscape Orientation

If you shoot Landscape Make Sure your Negative Space is Useful

Negative space not useful here

Composing Two Or More People


Schoenfeldt, 2000.

SAMPLES


CONCRETE CULTURE
INDEPENDENT
Dylan Reynolds


Erica Smith

Sydney Devault

Sydney Devault

Hannah Newmark

Hannah Newmark

Hannah Newmark

Hannah Newmark

Hannah Newmark

Russell Haggard


Cassie
Kobrin
THE
CHAMP

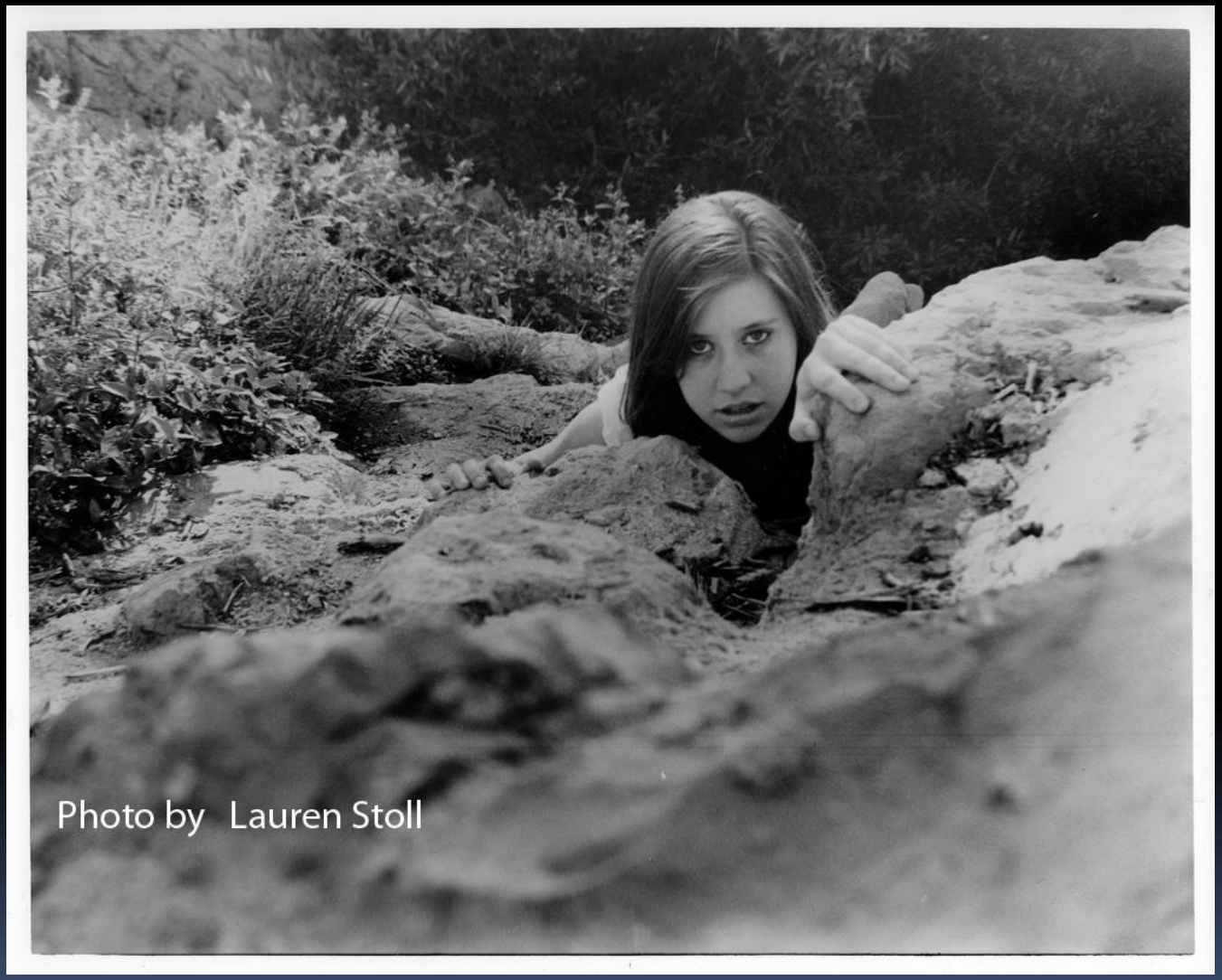


Photo by Lauren Stoll


Katie Kempster

Elizabeth Halpin-Coughlin

Mikaela Piekarski


Katie Kempster

Zach Pierce


Photo by Cassie Kobrin

Brian Holtby

Brian Holtby

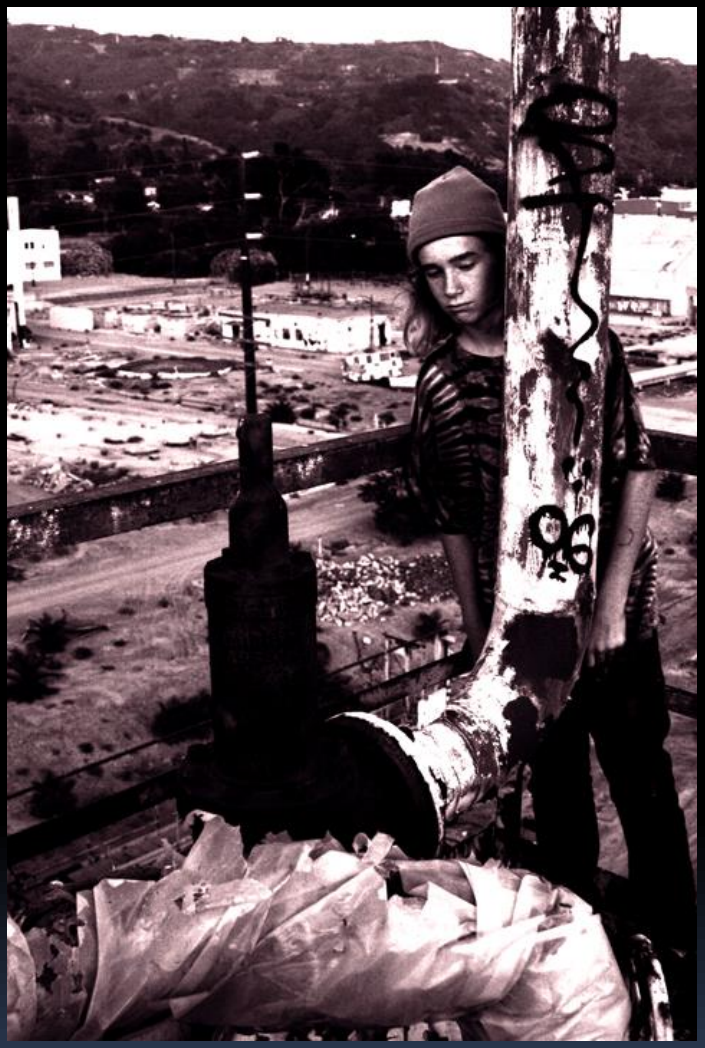
Jackie Nelson

Chelsea Martino

Raquel Arreola

Loni Hands

Adam Lane



Kurt
Schiele

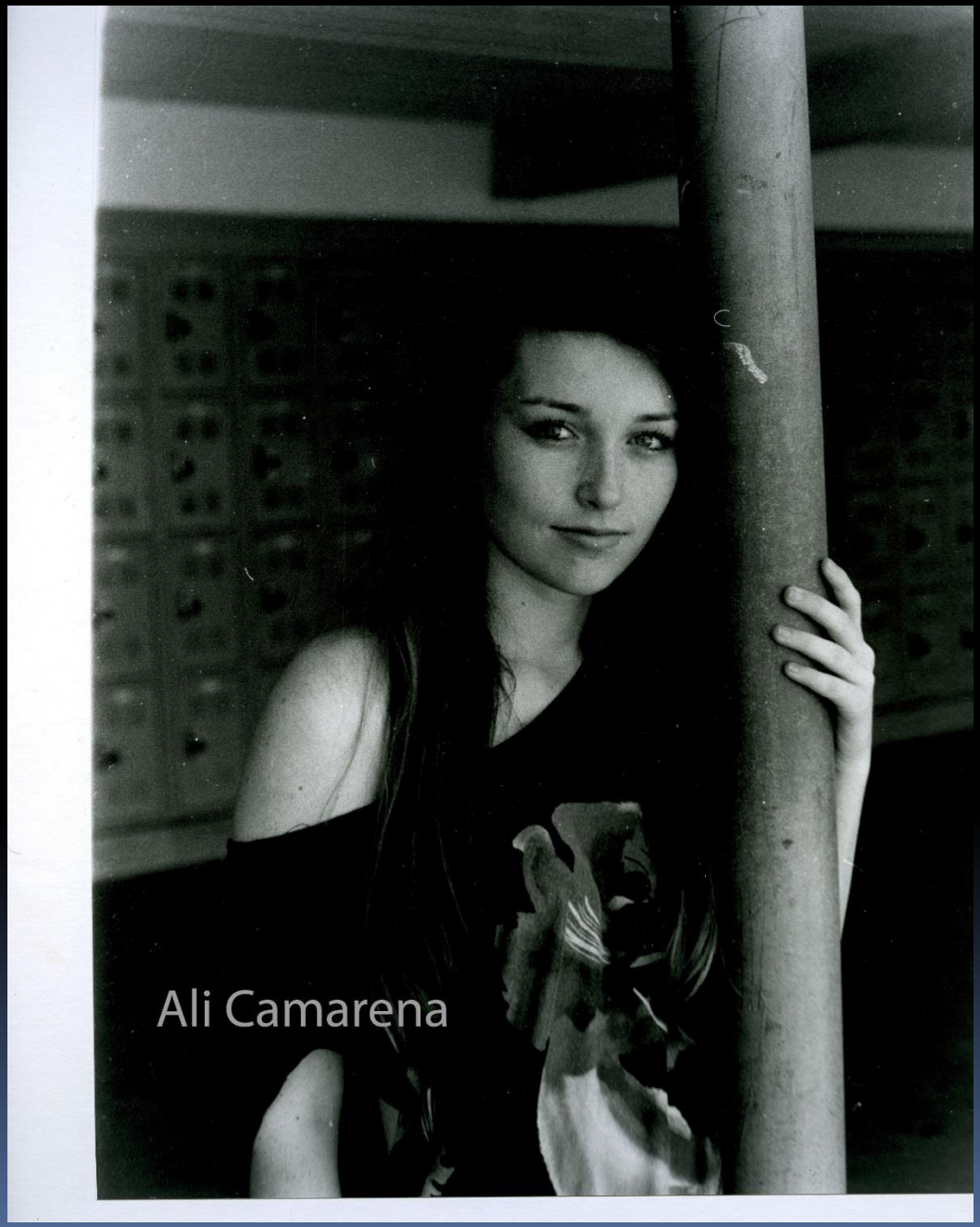

Jamie Baker


Siya Patel


George Graziano


Sam Prasopthum


Diana Chavez


Ali Camarena

Shallow Depth of Field

- Shoot with a large aperture
- Background softens
- Face becomes the ***Focal Point (especially the eyes)***

How to achieve shallow DOF

With a working light meter

- Set your aperture to a large f-stop such as f-2, f-3.4, f-4, f-5.6.
- Then use your light meter to set the shutter speed

Avoid Mergers

- This photo has avoided mergers well
- Watch your background to make sure there are no trees growing out the head

ALTHOUGH INTENTIONAL MERGERS CAN BE INTERESTING….


EMRE


© Frank Zullo


INTERESNO.dn.ua


INTERESNO.dn.ua


INTERESNO.dn.ua


INTERESNO.dn.ua

LANDSCAPE

Kyle Bradshaw

Hillary Morefield

Hillary Morefield

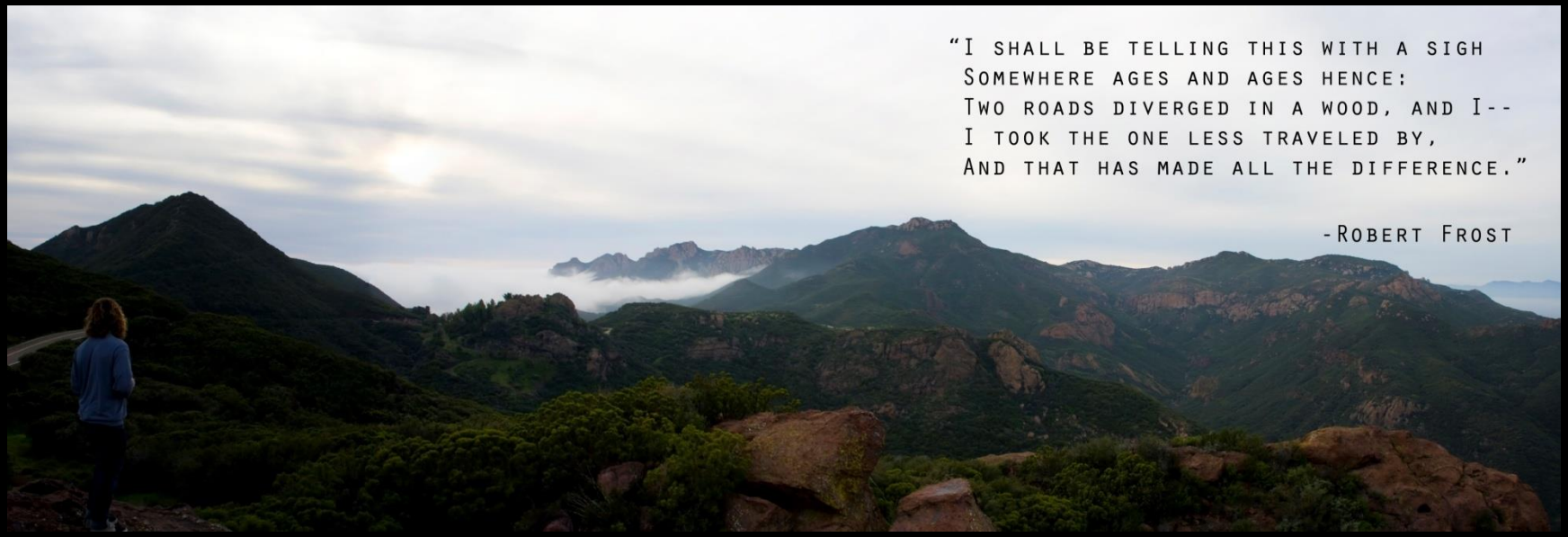
Hillary Morefield

Ian McKay

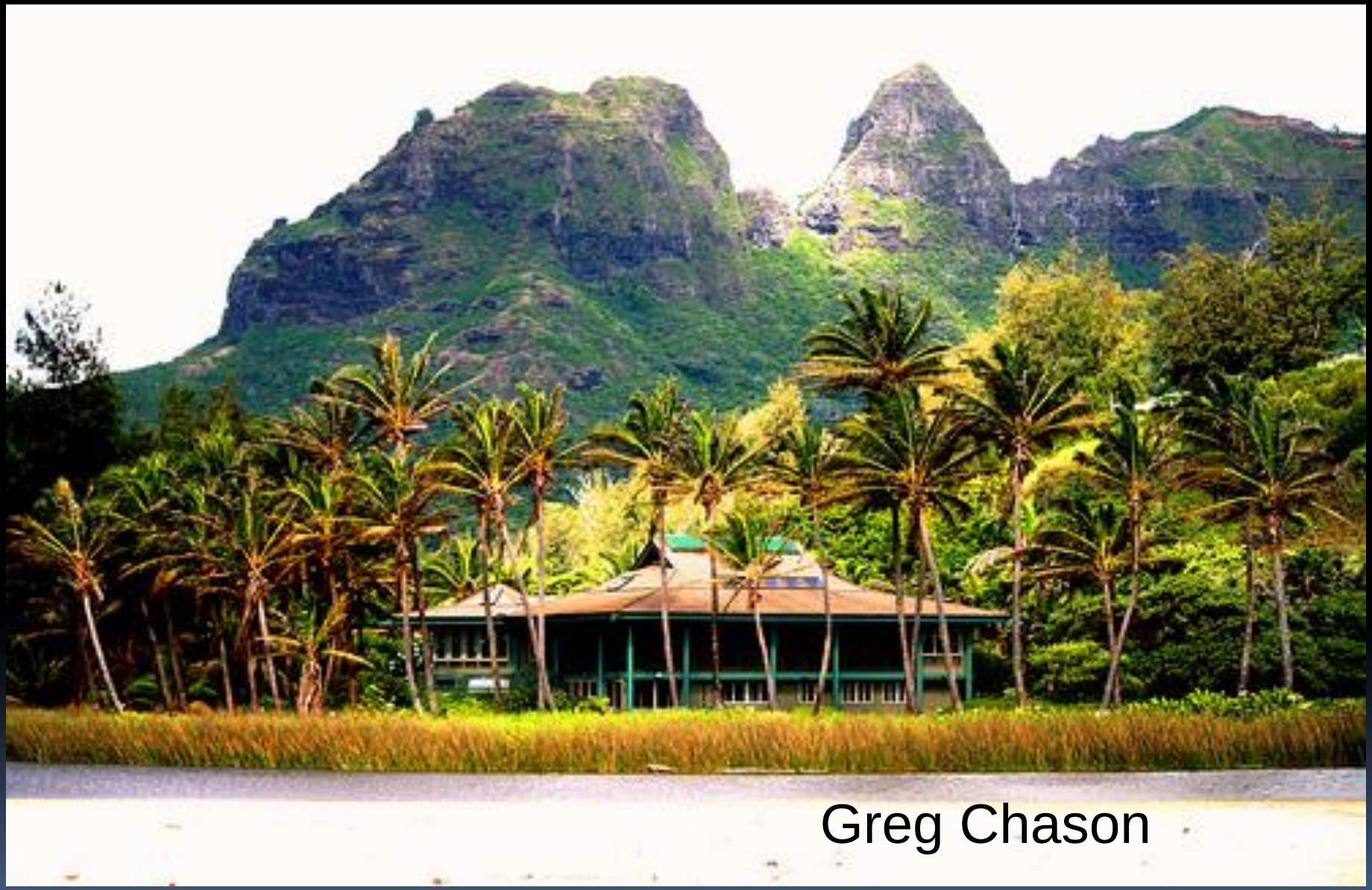
Ian McKay

Diana Bronakowska

Justy Bublitz

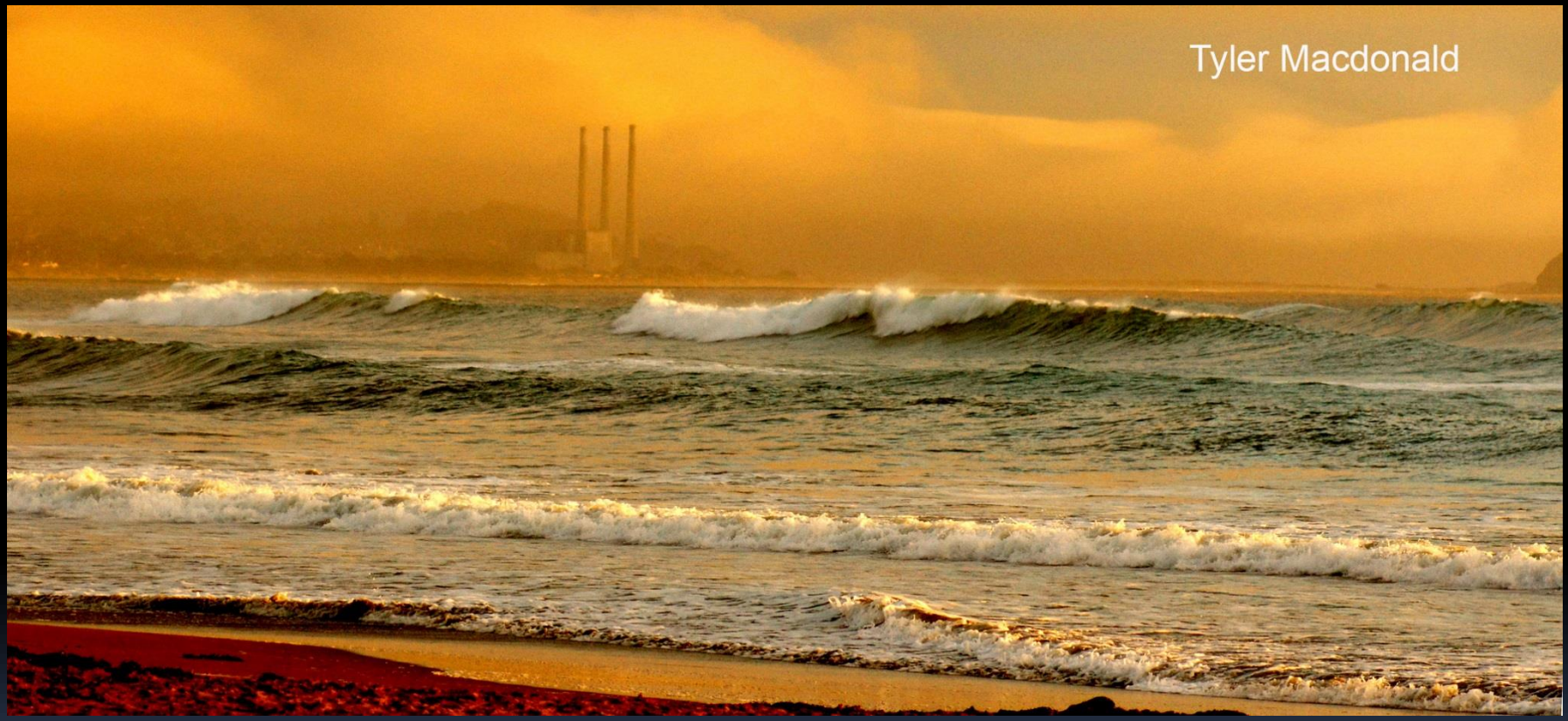


Justy Bublitz

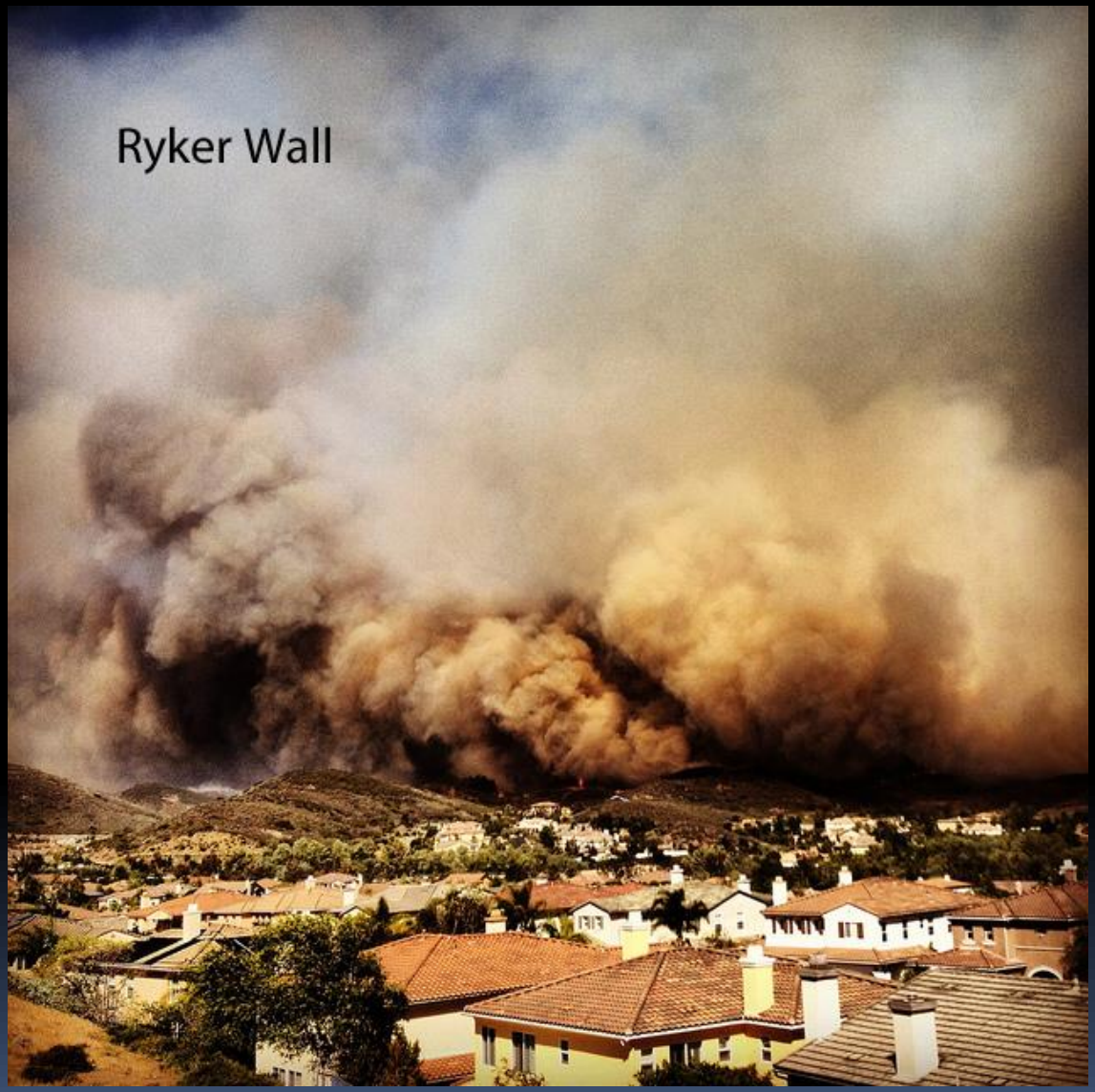

Greg Chason


George Graziano


George Graziano


Tyler Macdonald


Johnny Agulia


Ryker Wall

Shooting Modes

A or Av (Aperture Priority or Aperture Value Mode)

Change aperture by moving dial

You set aperture, camera sets the shutter speed

f/32

f/11

f/4.5

f/32

f/11

f/4.5

A way to remember depth of field

f/32 – larger number f-stop = more information in photo

f/4.5 – smaller number f-stop = less information in photo

Next week: Equivalent Exposure, Shutter Speed, Motion Photography