

# Dental Photography

## Fundamentals And Application

Presented by  
Dr. Michael Yurth, D.D.S.



## Disclosure

# Michael Yurth DDS

Currently works as

LEAD DENTIST

for a FQHC Public Health dental clinic in central Washington  
**Yakima Valley Farm Workers clinic** in Grandview, WA

Also is the

Residency Program Director

for an **A**dvanced **E**ducation in **G**eneral **D**entistry residency  
program in Washington State called  
**Northwest Dental Residency Program**

# What do I use?

- This is the new MIRRORLESS camera rig I use in clinic now in Toppenish



# My Intra-Oral Camera Rig

- The core of my system is the:
- Canon **R10** MIRRORLESS camera body
- Canon **RF 100mm** f/2.8 MACRO LENS
- Canon **MT-26EX-RT** MACRO TWIN LIGHT



# My Intra-Oral Camera Rig

- This twin light allows me to adjust the IN/OUT **ANGLE** and **POSITION** of the flash sources



# Settings

- The only thing left to do is set the controls. The settings I use on the camera (seen below) are:
  - **MANUAL** mode,
  - a **SHUTTER SPEED** of **1/200<sup>th</sup>** of a second,
  - an **APERTURE** = **f/32**,
  - and **ISO** = **100**.
  - With flash set to **MODE** = **ETTL**
  - I also store both **RAW** and **JPG** files on the card for each shot
- These settings allow for maximum depth of field with minimal blur.





# What does all that mean?

- As you can already tell, photography can be **very complicated!!!!**

- **If you don't have a background in photography I would expect that you will need to learn as much to be good at that as you would to make a good denture!**

- I believe that this is a VITAL dental skill!

# **SECTION #2**

# **THE Explanation**



# Photographic Fundamentals

## What makes a photograph “GOOD”?



- What do you need to understand to be able to take a good photograph and make it usable?

# Photographic Fundamentals

## The fundamentals

A “GOOD” photo,

is one that does the job it was intended to do, and is even better if it is aesthetically pleasing to the intended audience.

So what is the intent of the image?

# Photographic Fundamentals

- Fundamental Concepts we all should know

What is EXPOSURE?

If you understand this concept and its implications you can get GOOD photographs with ANY camera!

# Photographic Fundamentals

## The Definition of Exposure

**Exposure:** The **total amount of light** captured by a camera through a lens for a single image.

# Photographic Fundamentals

The simple way to look at exposure is to think of light as having **volume**, and each exposure is an **AMOUNT** of light that is captured.

UNDEREXPOSED = Not enough light

**GOOD EXPOSURE** = **Proper amount of light**

OVEREXPOSED = Too much light

There are **MANY** different ways to capture the proper amount of light for each good exposure.

# Photographic Fundamentals

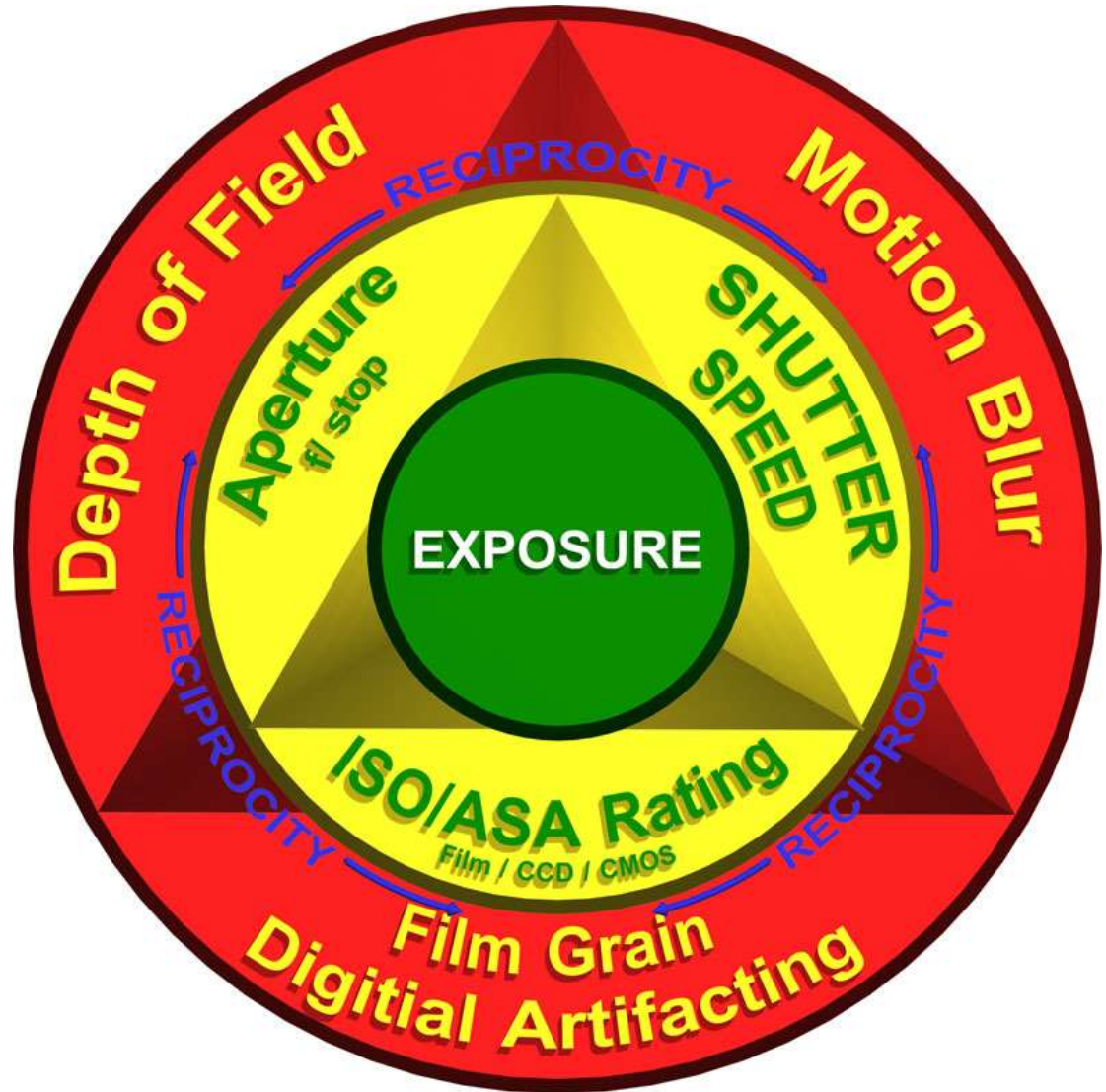
Exposure The **total amount of light** captured by a camera through a lens for a single image.



Getting the correct Exposure should be the goal or TARGET we are shooting for with each press of the button.

# Photographic Fundamentals

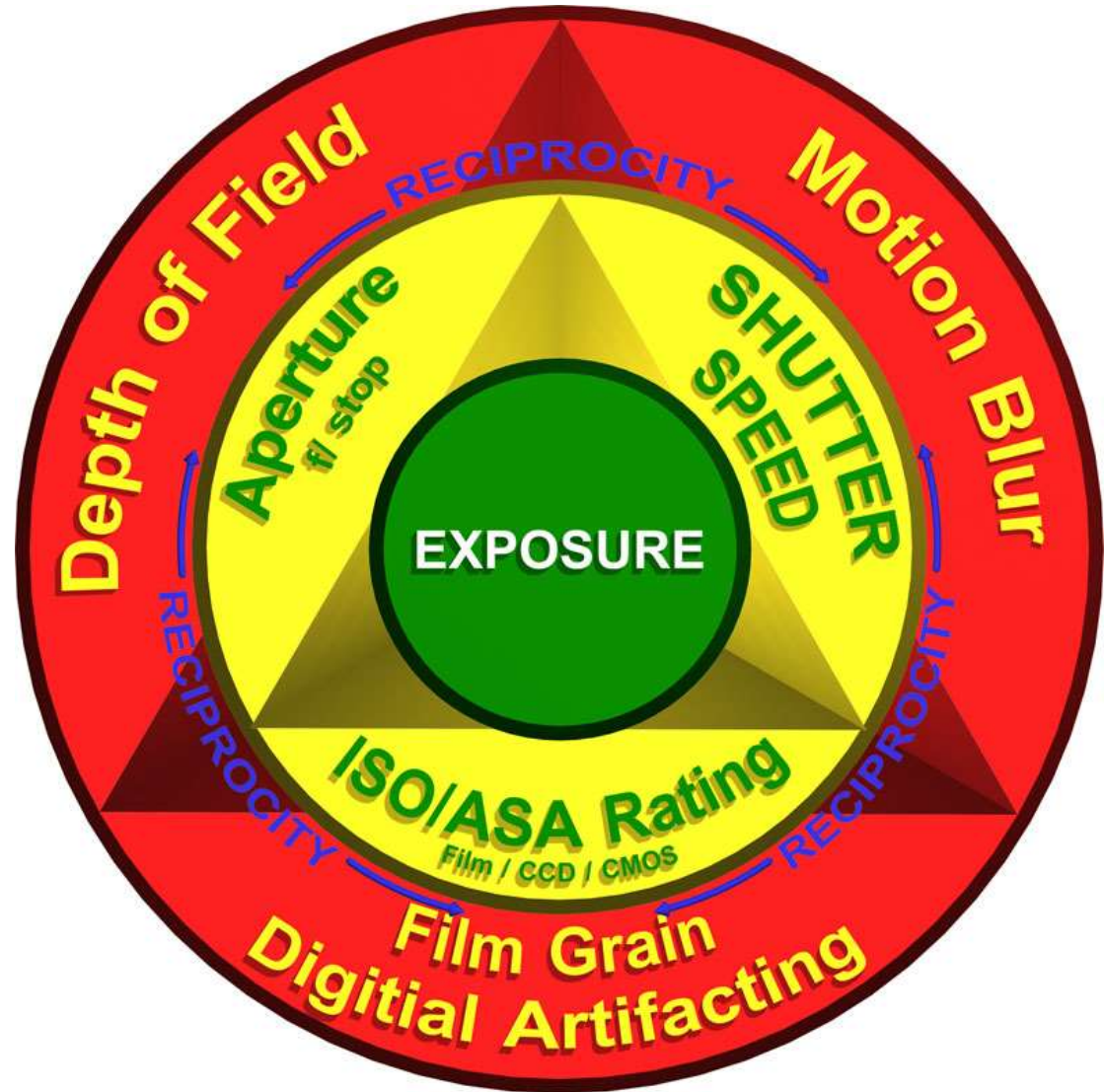
This is what comes to my mind when I think of a visual representation of what goes into **EXPOSURE**





# Photographic Fundamentals

There are many things that go into hitting the **target** of a “good” **EXPOSURE**



So let's break it down into digestible pieces.



# Photographic Fundamentals



- Fundamental Concepts we all should know

EVERY camera has three fundamental components

A **LENS** with an **APERTURE**

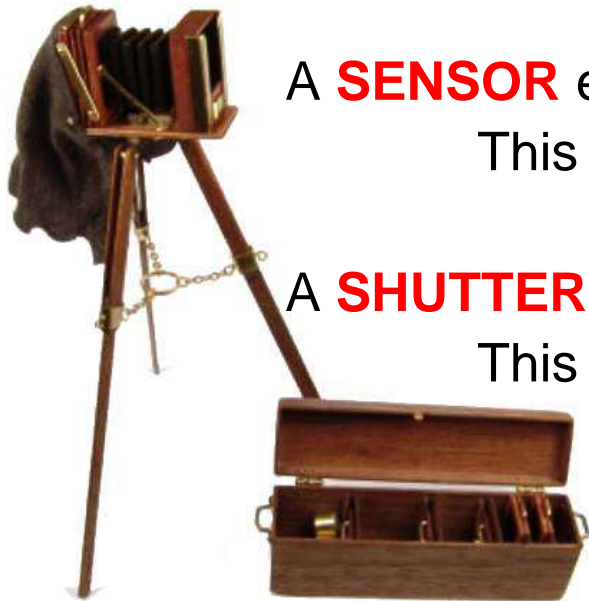
This gathers and directs light into the camera

A **SENSOR** either **FILM** or **DIGITAL**

This captures and records the image

A **SHUTTER** which is **GATE** in front of the sensor

This opens and closes allowing the light to pass in



# Photographic Fundamentals

Exposure The **total amount of light** captured by a camera through a lens for a single image.



Getting the correct Exposure should be the goal or TARGET we are shooting for with each press of the button.

# Photographic Fundamentals

- So because of these three physical parts, each exposure has

**THREE**  
**components**

- The “TRIAD”

ISO / Sensor  
Sensitivity

Shutter Speed

Aperture



# Photographic Fundamentals

## TRIAD

**LEG 1 = Sensitivity**

# Photographic Fundamentals

## ISO / ASA

This is the **sensitivity** to light of the film or the digital sensor in the camera.





# Photographic Fundamentals

- Definition
- **ISO** (International Standards Organization)
- **ASA** (American Standards Association)
  - These are equivalent standardized ratings of the efficiency in capturing light, or its **sensitivity**.
    - These apply to both film and digital CCD/CMOS sensors
      - The higher the ISO number,
      - the more sensitive it is to light,
      - or the faster the film/sensor is.
  - Each full increment (or **STOP**) in the ISO rating scale **doubles** or **halves** the sensitivity to light.



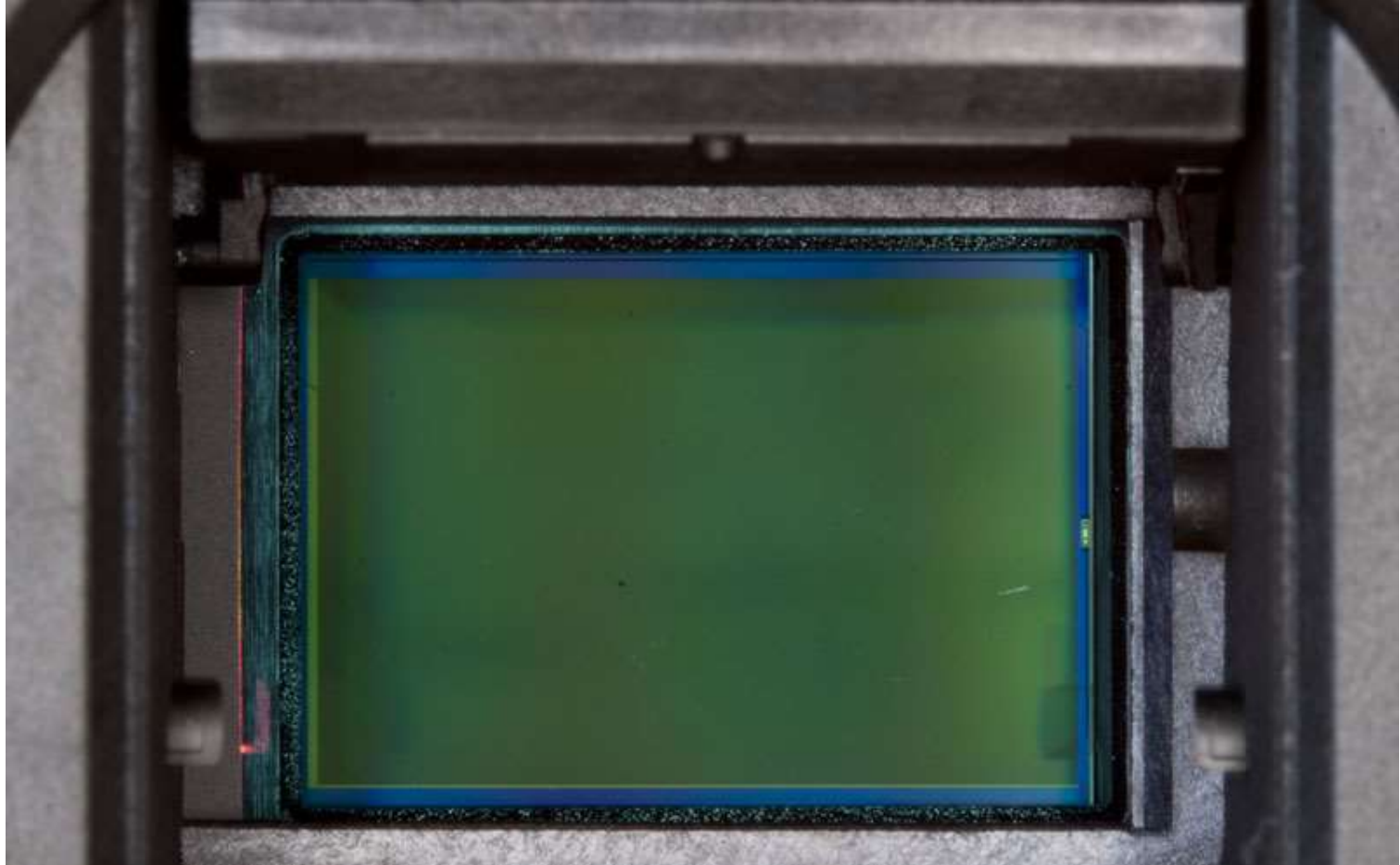
# Photographic Fundamentals

- The most commonly used film and film **ISO** speeds are:
  - **25**                    **slower** (Fine black & white)
  - **50**
  - **100**                    (AKA Outdoor)
  - **200**
  - **400**                    (AKA Indoor)
  - **800**
  - **1600**                    **faster** (Modern digital)



– These increments are considered **FULL STOPS**

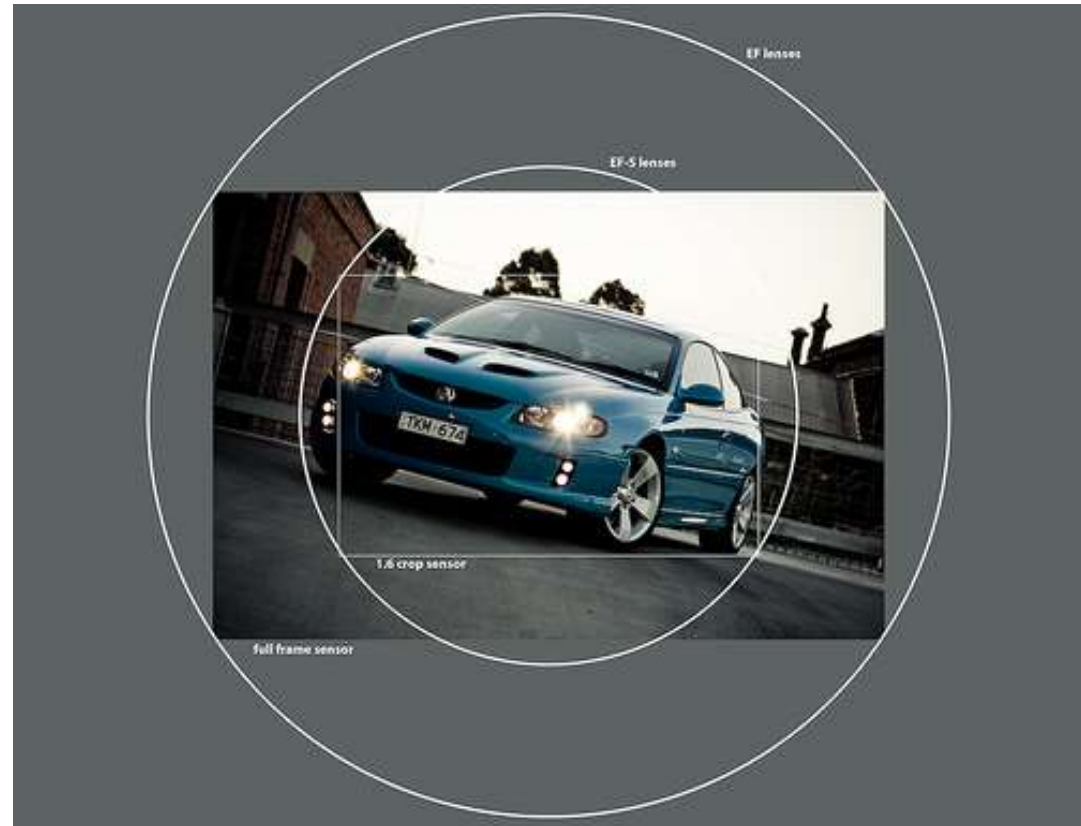
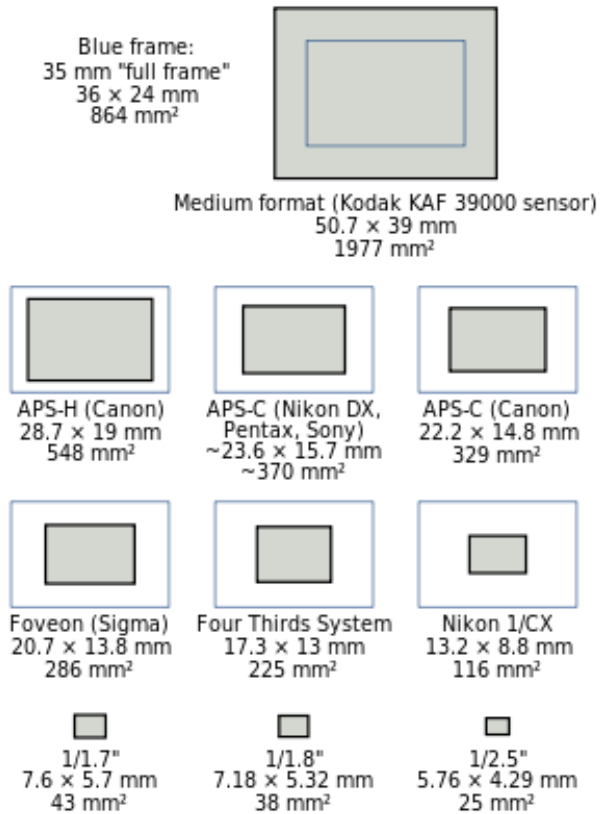
# Photographic Fundamentals



**Canon CMOS**

With digitally adjustable ISO

# Photographic Fundamentals

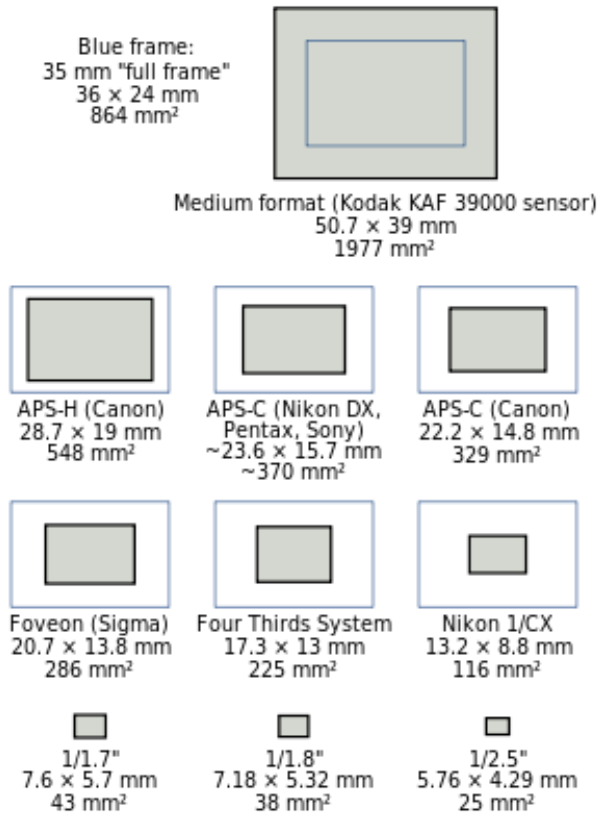


## Sensor Size

All sensors are NOT the same size and can cause a multiplication factor to standard lenses



# Photographic Fundamentals



## Sensor Size

All sensors are NOT the same size and can cause a multiplication factor to standard lenses



# Photographic Fundamentals

**FULL FRAME**

Sensor

**CROPPED (1.6x)**



## Sensor Size

All sensors are NOT the same size and can cause a multiplication factor to standard lenses

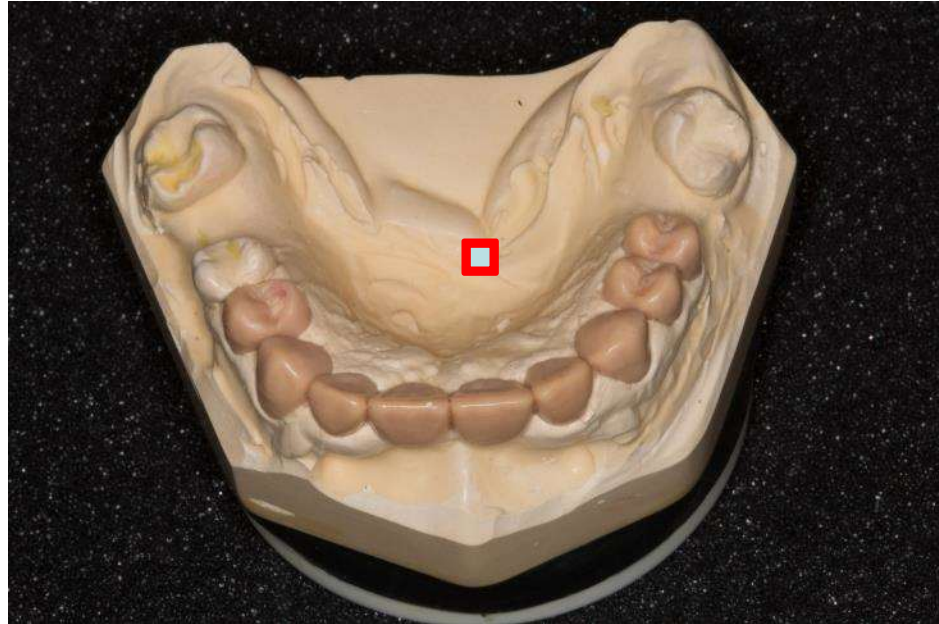


# Photographic Fundamentals

**FULL FRAME**

Sensor

**CROPPED (1.6x)**



## Sensor Size

All sensors are NOT the same size and can cause a multiplication factor to standard lenses

# Photographic Fundamentals

## ISO / ASA



This is the **sensitivity** to light of the film or the digital sensor in the camera.





# Photographic Fundamentals

## ISO / ASA



This is the **sensitivity** to light of the film or the digital sensor in the camera.



# Photographic Fundamentals

## TRIAD

**LEG 2 = Shutter Speed**

# Photographic Fundamentals

## Shutter Speed

This is the **amount of time** that the curtain or shutter in the camera will be open to allow light through the lens to the sensor/film.



# Photographic Fundamentals

- Definition

The **shutter speed** controls the **amount of time** the shutter will remain open to allow light to pass through.

- Shutter speeds are indicated in seconds, and fractions of a second on the camera's dial or indicator.
  - The higher the fractional number,
  - the faster the shutter moves,
  - or the shorter the OPEN time is.
- Each full increment (or **STOP**) in the speed scale **doubles** or **halves** the amount of time the shutter is open allowing light in.

# Photographic Fundamentals

- The most commonly used shutter speeds are:
  - **1/8<sup>th</sup> of a second** (Motion can be blurry)
  - **1/15**
  - **1/30**
  - **1/60**
  - **1/125**
  - **1/250**
  - **1/500<sup>th</sup> of a second** (Good to freeze motion)
- These increments are considered **FULL STOPS**

# Photographic Fundamentals

## Shutter Speed



This is the **amount of time** that the curtain or shutter in the camera will be open to allow light through the lens to the sensor/film.

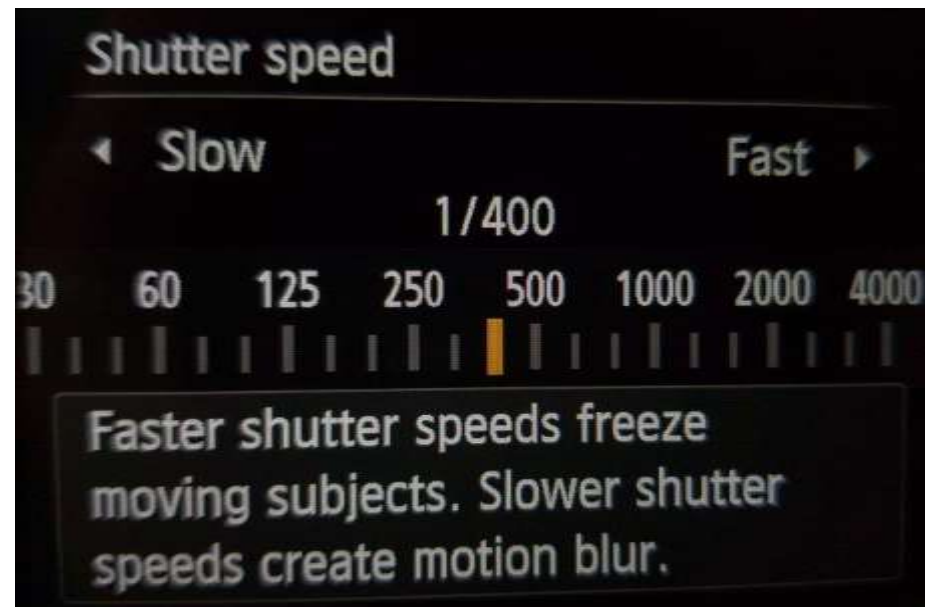


# Photographic Fundamentals

## Shutter Speed



This is the **amount of time** that the curtain or shutter in the camera will be open to allow light through the lens to the sensor/film.





# Photographic Fundamentals

## TRIAD

**LEG 3 = Aperture**

# Photographic Fundamentals

## Aperture

This is the **size of the opening** in the iris of the lens that will conduct light into the camera.



# Photographic Fundamentals

- Definition

The aperture is the **size of the opening** in the camera's lens, that allows light to pass through to the film/sensor

- Aperture size is described by a series of “f” numbers.
  - The higher number,
  - the tighter the iris,
  - or the smaller the opening is.
- Each full increment (or **STOP**) in the aperture scale **doubles** or **halves** the amount of area in the opening allowing light in.

# Photographic Fundamentals

- The most commonly used aperture values are:
  - **f/2.8** (Very OPEN)
  - **f/4**
  - **f/5.6**
  - **f/8**
  - **f/11**
  - **f/16**
  - **f/22** (Very CLOSED)
- These increments are considered **FULL STOPS**

# Photographic Fundamentals



**f/2.8**



**f/4**



**f/5.6**



**f/8**



**f/11**



**f/16**

The lowest f number of a lens denotes the maximum amount of light it can let in, therefore lenses with very low f #s are considered

**“FAST” lenses**

This is because they can let light into the camera in higher volume

# Photographic Fundamentals

## Aperture



This is the **size of the opening** in the iris of the lens that will conduct light into the camera.

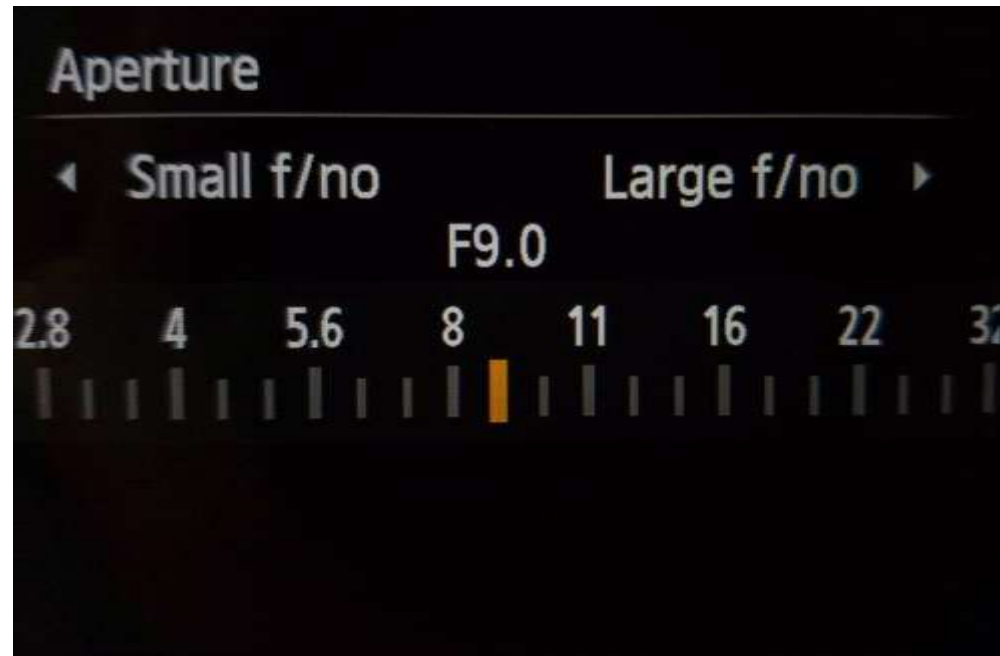


# Photographic Fundamentals

## Aperture



This is the **size of the opening** in the iris of the lens that will conduct light into the camera.





# Photographic Fundamentals

## Exposure

The **total amount of light**

captured by a camera through a lens for a single image.



# Photographic Fundamentals

- So because of these three physical parts, each exposure has

**THREE**  
**components**

The “TRIAD” makes the exposure!

ISO / Sensor  
Sensitivity

Shutter Speed

Aperture



# Photographic Fundamentals

## RECIPROcity

- If you **change 1 leg**, you can **change another** the same amount and have the **SAME EXPOSURE** with a **different visual effect**

### ISO / Sensor Sensitivity

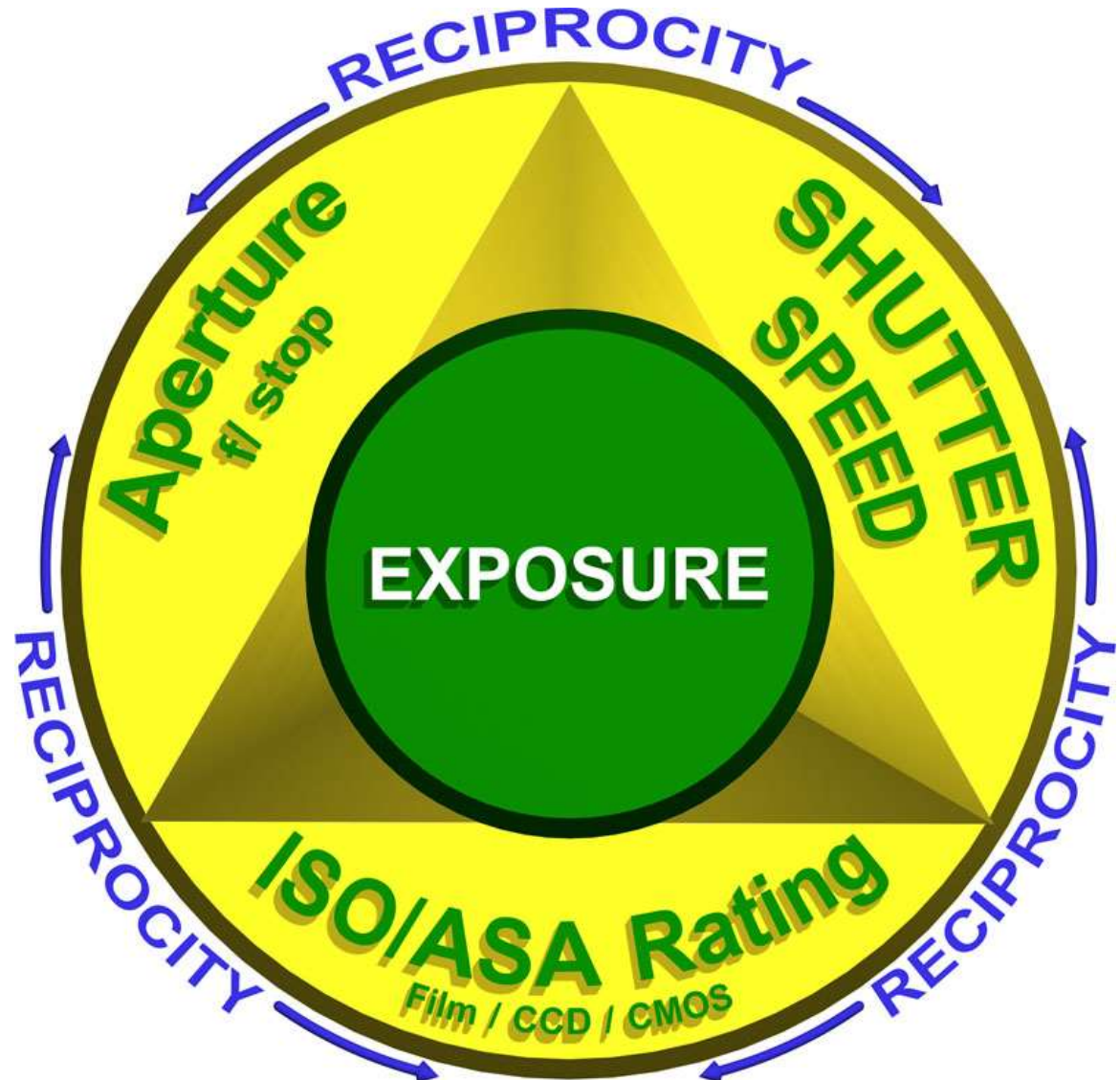
Each **STOP**  
is 0.5X or 2X the next

### Shutter Speed

Each **STOP**  
is 0.5X or 2X the next

### Aperture

Each **STOP**  
is 0.5X or 2X the next



# Photographic Fundamentals

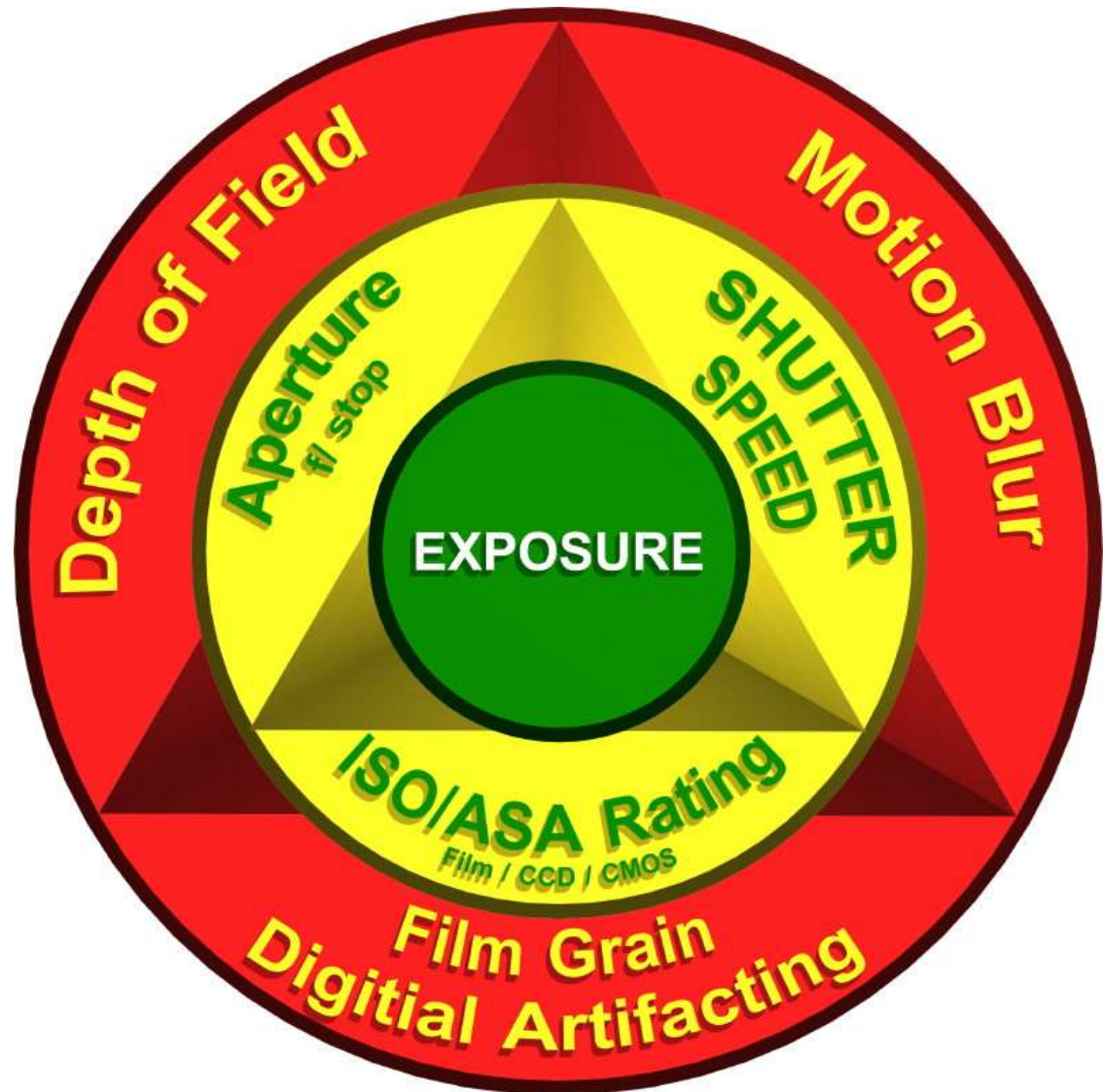
- Each of the three exposure components has a troublesome attribute or counterpart.

- The “EVIL TRIAD”

Grain /  
Artifacting

Motion Blur

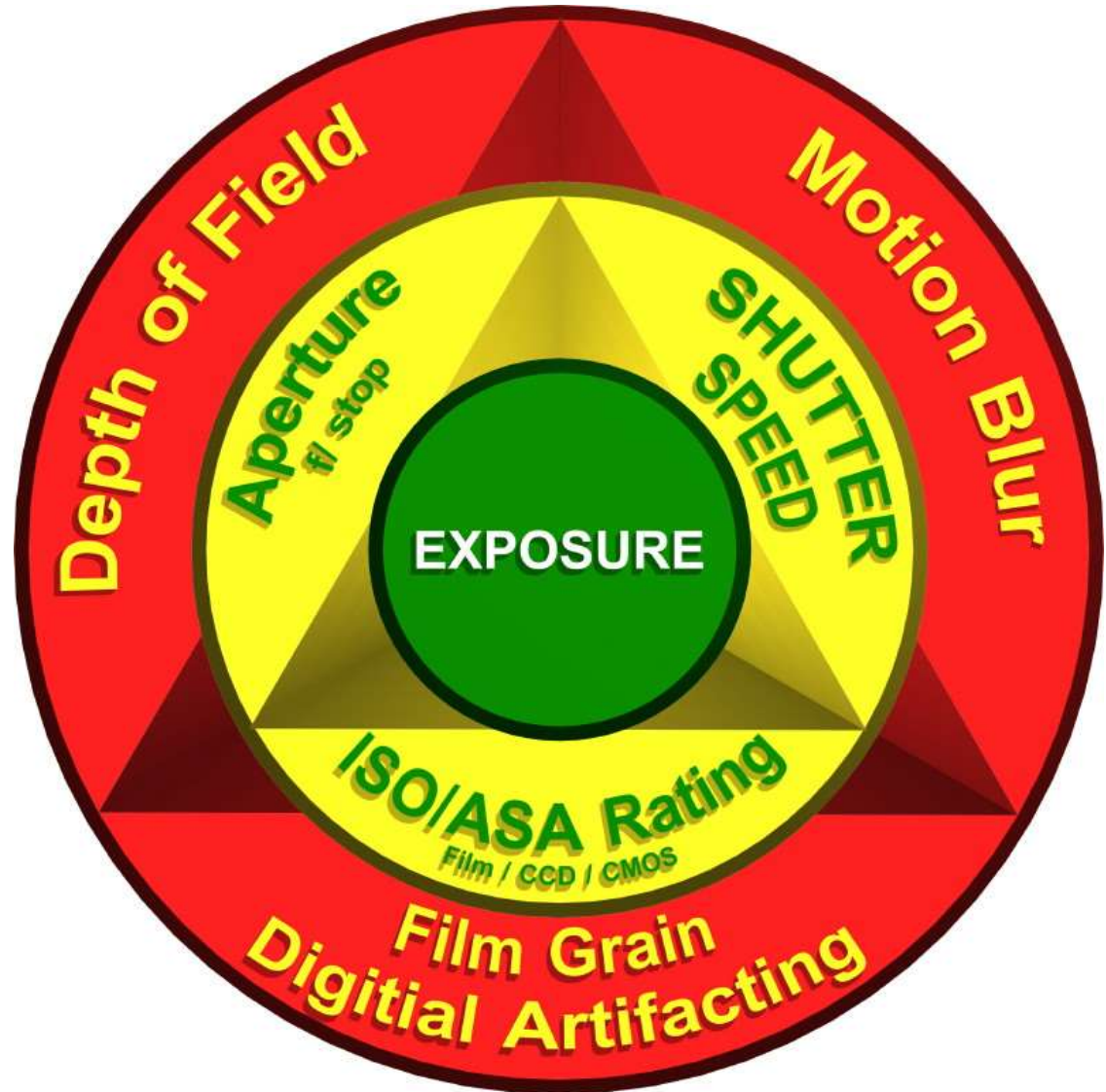
Depth of Field





# Photographic Fundamentals

- These other attributes are why different “equivalent” exposures don’t have the same visual appearance in the final image.



# Photographic Fundamentals

## EVIL TRIAD

Associated Effect

**LEG 1 = Grain**



# Photographic Fundamentals

- Grain / Artifacts
- Sensitivity and **Sharpness** are inversely related.



# Photographic Fundamentals

- Definition

**Film Grain** = The particles of **silver halide** on the surface of film that capture light get larger as the film speed goes up.

The **larger the grains** of silver the more noticeable the random **texture** will be in the printed photograph.

So the **slower** the film, the **sharper** the image.  
**Lower ISO = Higher Sharpness**

# Photographic Fundamentals

- Definition

**Sensor Artifacts** = The sensors in digital cameras converting optical light into a digital signal become less accurate as the sensitivity is increased.

The **faster the sensor speed** is set the more noticeable the random **texture** will be in the printed photograph.

So the **slower** the sensor, the **sharper** the image.

**Lower ISO = Higher Sharpness**

Low ISO

vs

High ISO



# Photographic Fundamentals

## EVIL TRIAD

Associated Effect

LEG 2 = Blur

# Photographic Fundamentals

- Motion Blur
- **Distortion** caused in an image due to **motion** of either target or camera during the shot.





# Photographic Fundamentals

- Definition

**Motion Blur** = The longer the shutter is open, and the greater the motion of either the subject or the camera during the shot the more likely it is that the image will be distorted.

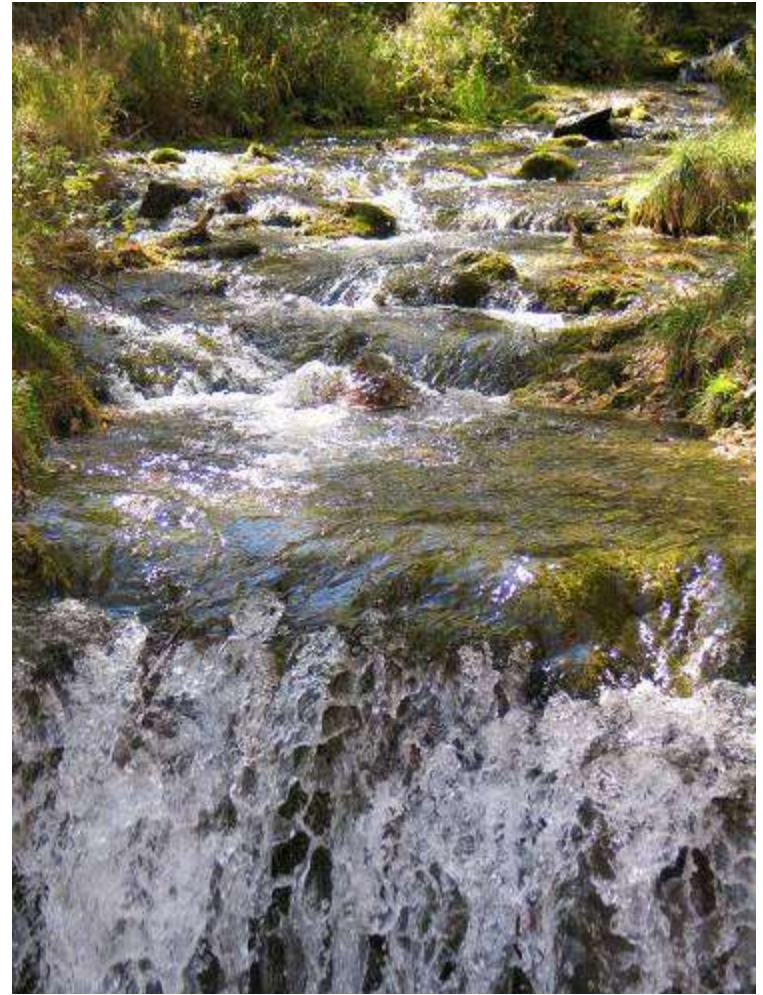
The **faster the shutter speed** is set the more any motion is **frozen in time** in the image, thus **increasing sharpness!**

**Faster Shutter Speed = Less Blur**

# Low S-Speed vs High S-Speed



ISO=100 f/8 @ **1/15<sup>th</sup>** sec



ISO=100 f/2.5 @ **1/500<sup>th</sup>** sec

# Photographic Fundamentals

## EVIL TRIAD

Associated Effect

LEG 3 = D.O.F.

# Photographic Fundamentals

## Focus and Depth of Field

- The **amount of space** in front of and behind the focal plane that is captured in **sharp focus**.
- **VERY IMPORTANT TO DENTISTS!!** And most difficult to understand.



# Photographic Fundamentals

- What is Focus?
- What does it mean “to be IN FOCUS”?
- The answer is

## SHARPNESS AT A SPECIFIC DISTANCE!

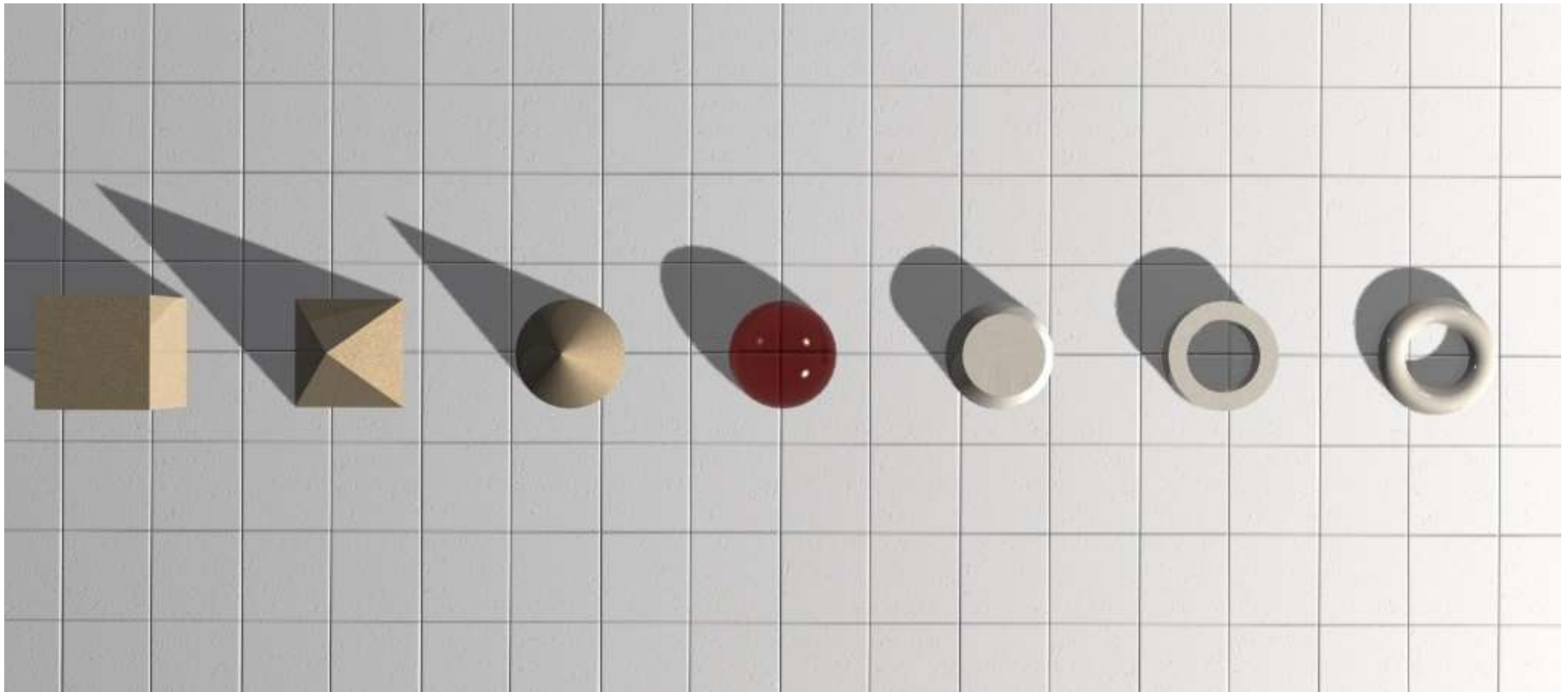
- The lens collects light rays coming from a certain set “focal distance” or “focal plane” and changes their direction to gather and be **“FOCUSED”** onto the film/sensor in a way that makes a sharp, clearly defined image.



# Photographic Fundamentals

Here is the basis for the following C.G. focus example

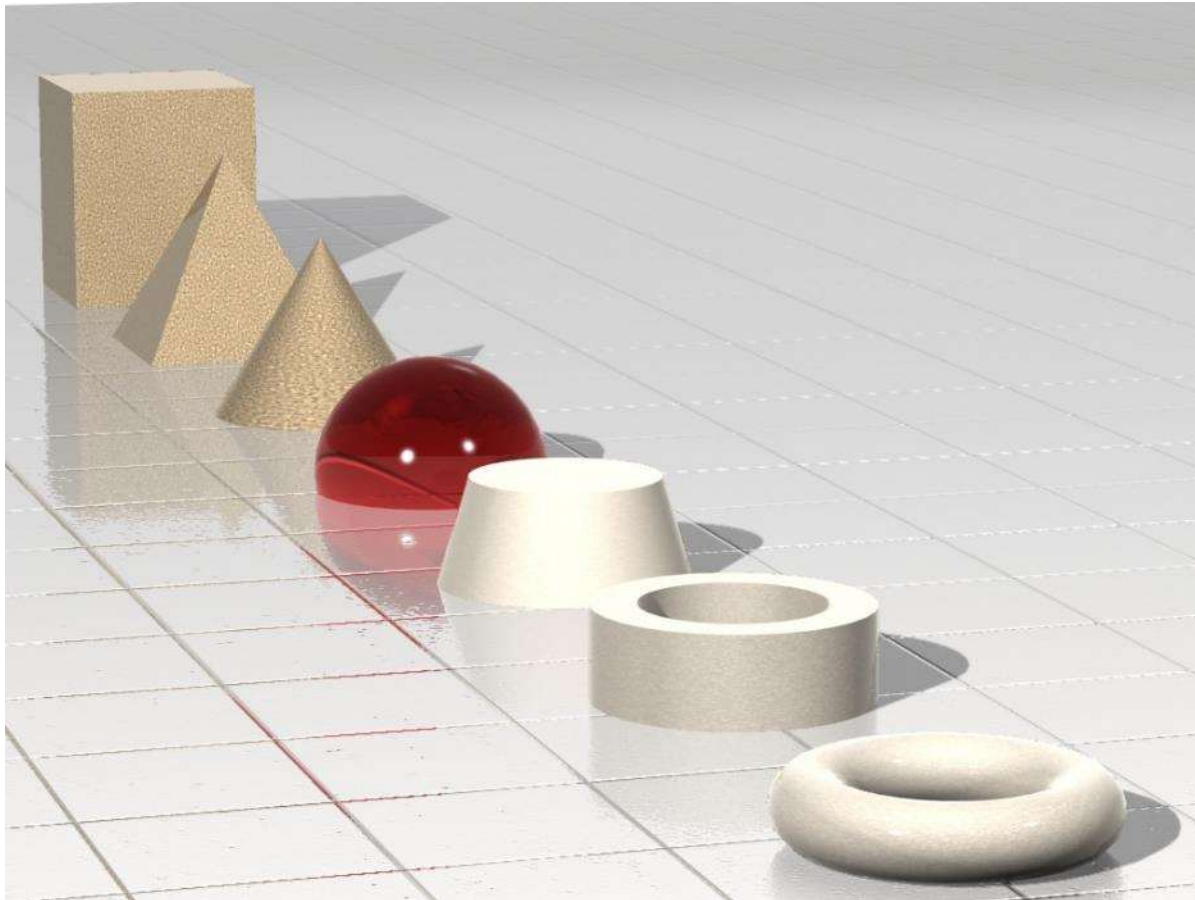
## Focus Depth





# Photographic Fundamentals

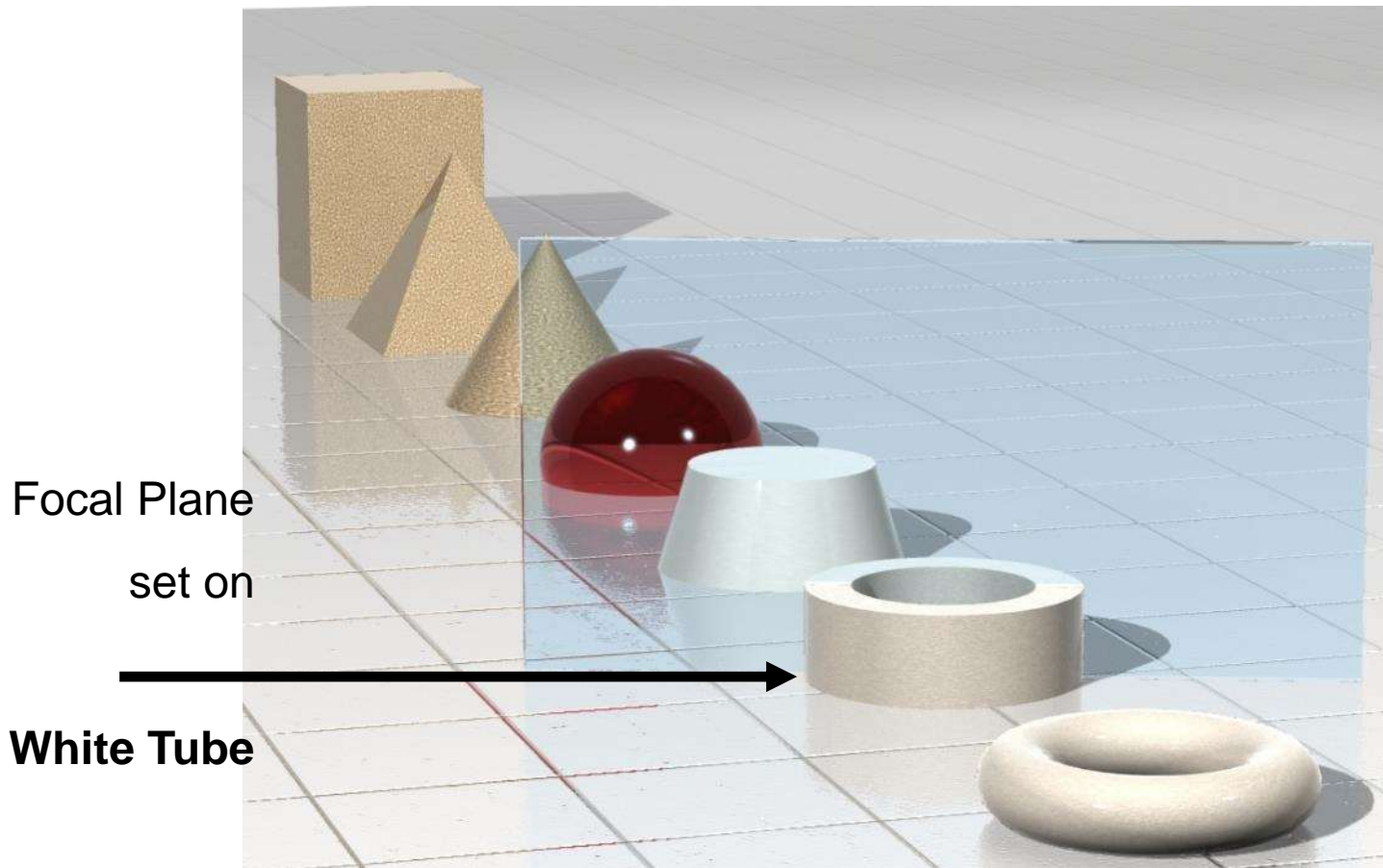
## INFINITELY DEEP FOCUS



# Photographic Fundamentals

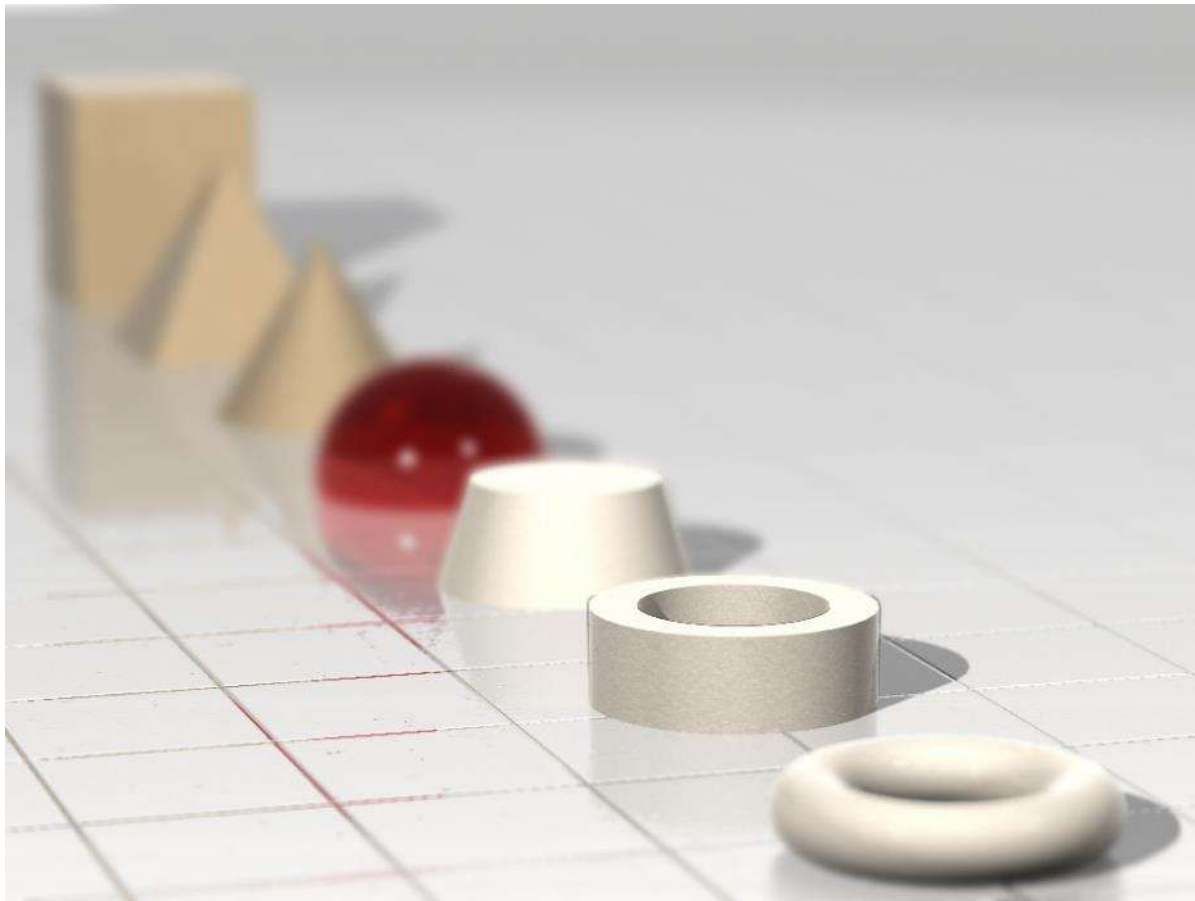
When you turn the focus ring to one side you get:

SHALLOW Focus depth? CLOSE



# Photographic Fundamentals

CLOSE – short distance focus point



# Photographic Fundamentals

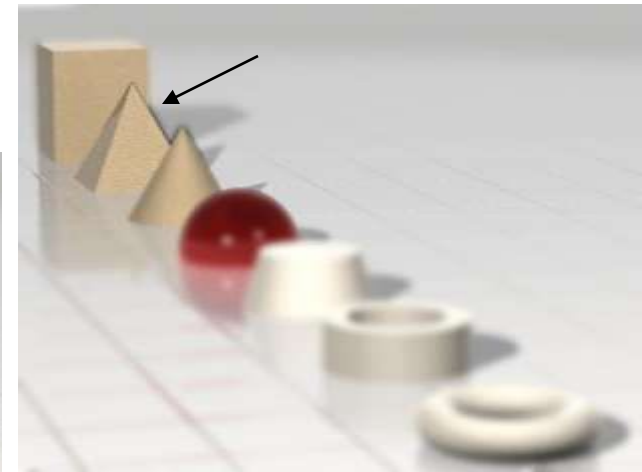
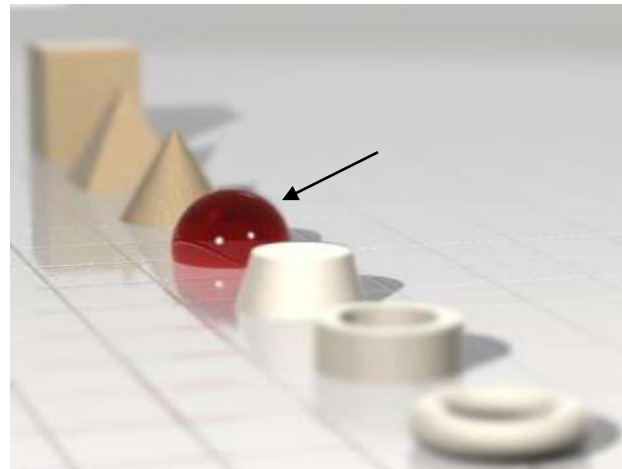
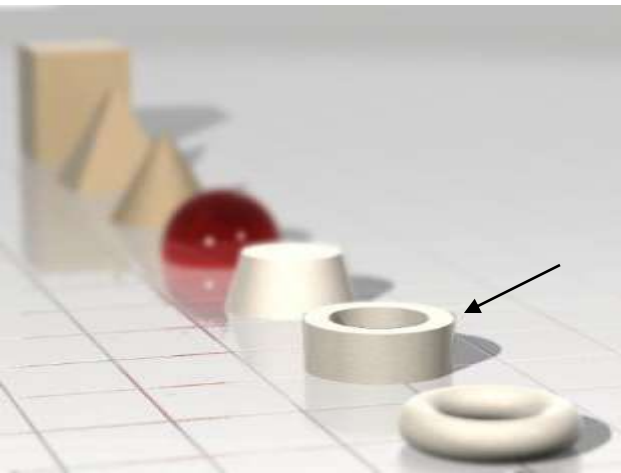
## What is Focus?

**SHARPNESS AT A SPECIFIC DISTANCE!**

CLOSE

CENTER

FAR



# Photographic Fundamentals

- Definition

**Depth of Field** = The zone of distance in a photograph that is considered acceptably “**in focus**” and looks “**sharp**”.

Focus is set in an image at a **DISTANCE** from the lens, and that distance is called the **FOCAL PLANE**, and the **depth of space(field)** in that image that is sharp is impacted by:

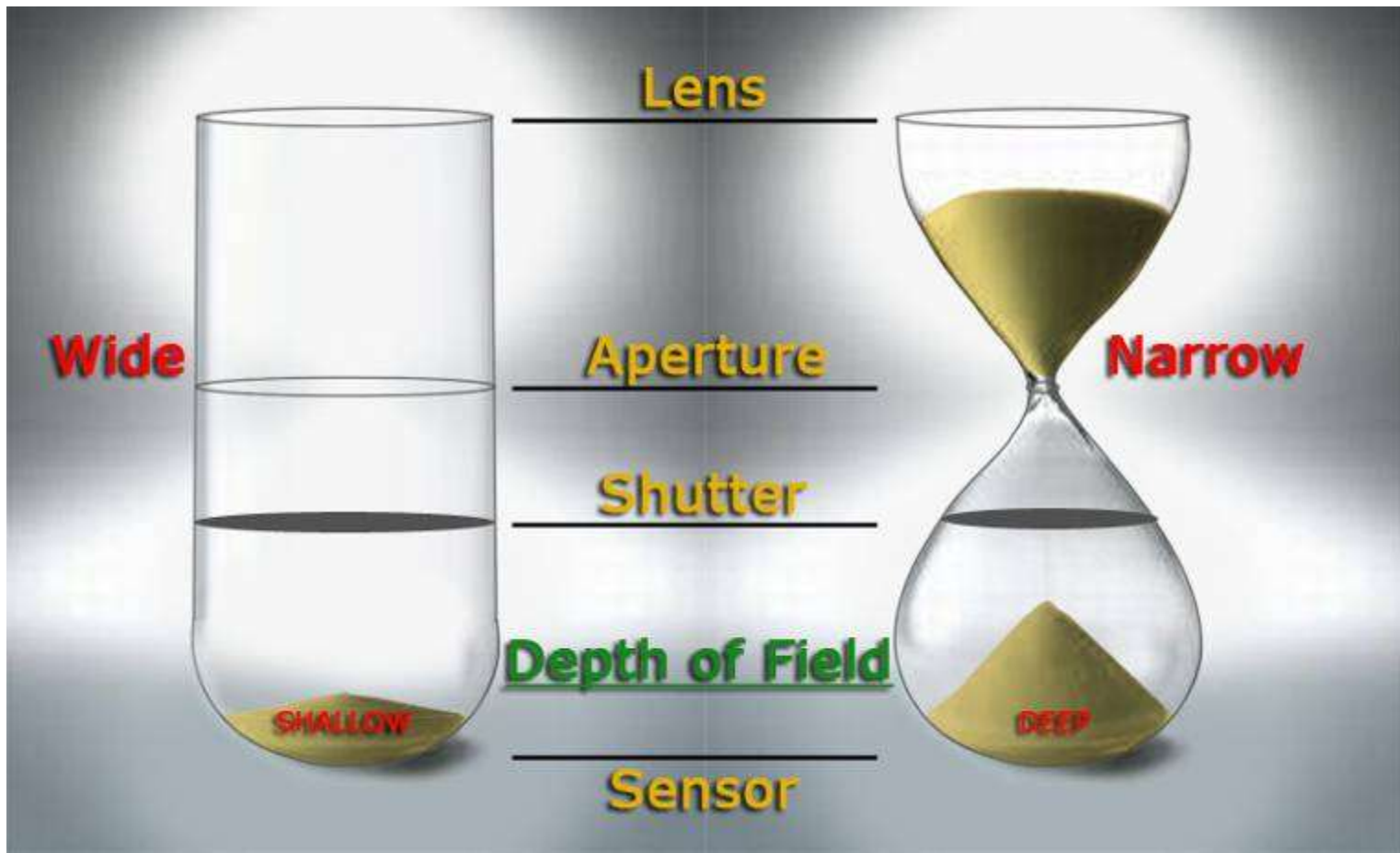
**Wider Aperture = Shallower Depth of Field**

**Closer Subject = Shallower Depth of Field**

**Longer Lens = Shallower Depth of Field**

# Photographic Fundamentals

Depth of Field = is most effected by the size of the APERTURE!



# Photographic Fundamentals

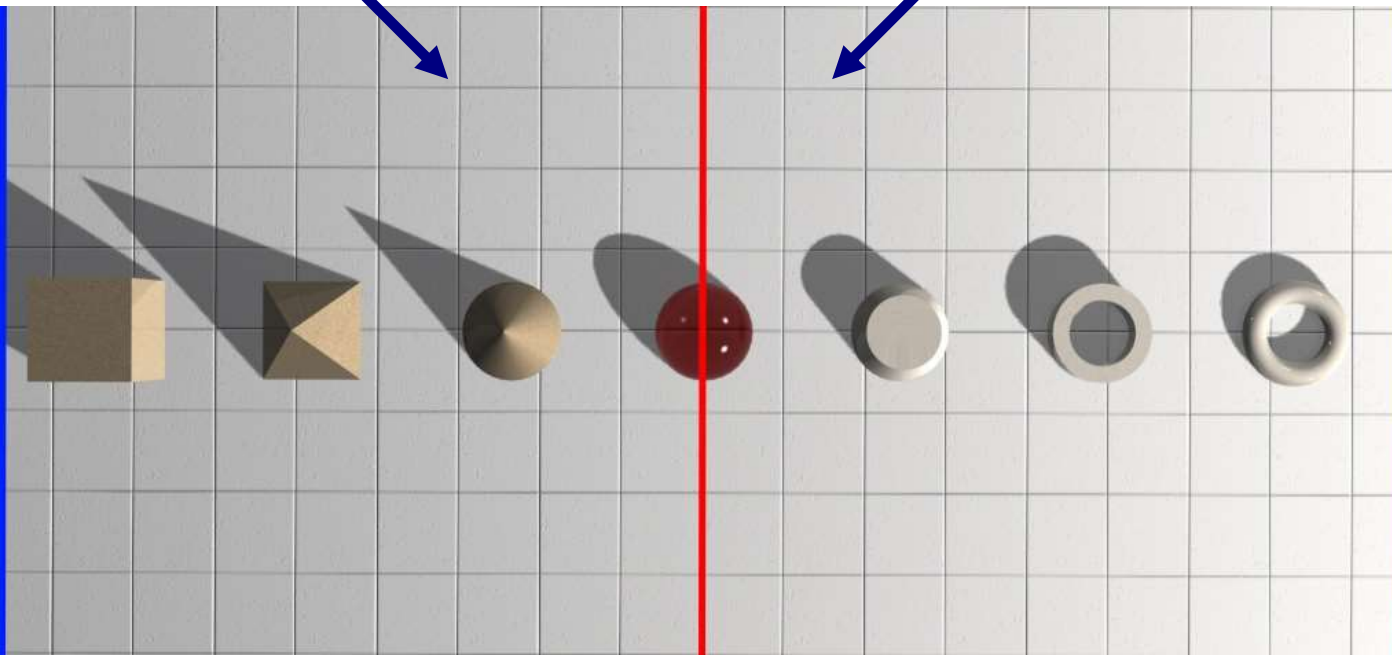
- Depth of Field = The Zone of Acceptable Sharpness

## DEEP DEPTH OF FIELD

**Focal Plane**

**Complete**

**Field in focus**



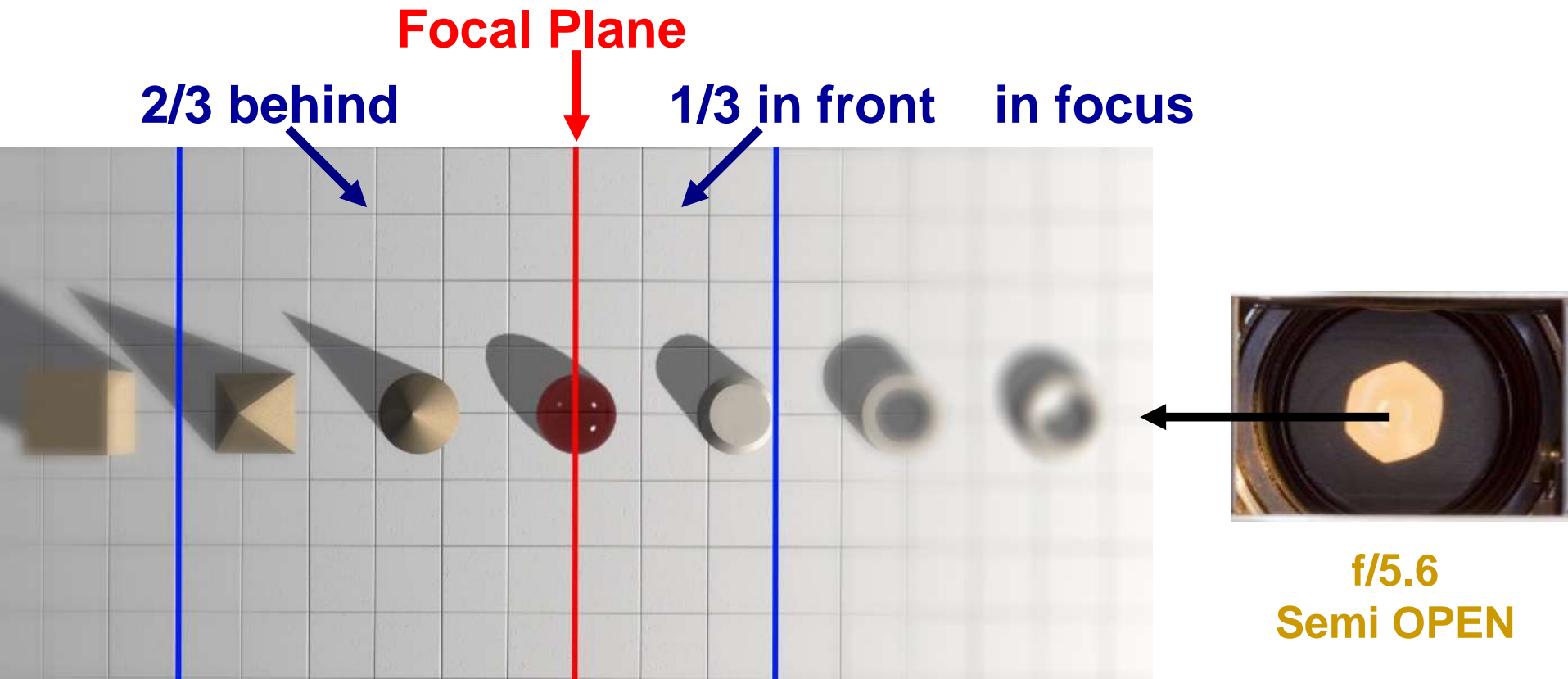
**f/16  
CLOSED**



# Photographic Fundamentals

- Depth of Field = The Zone of Acceptable Sharpness

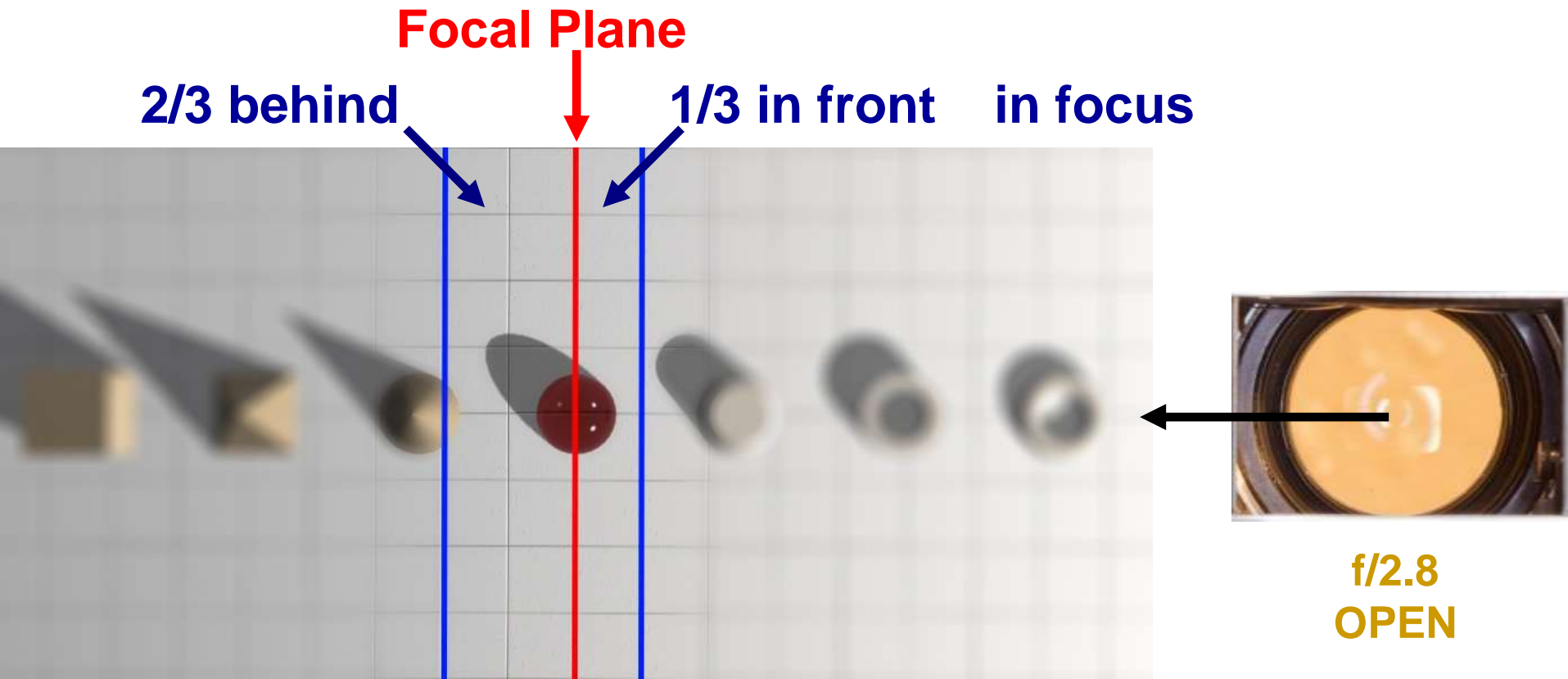
## MODERATE DEPTH OF FIELD



# Photographic Fundamentals

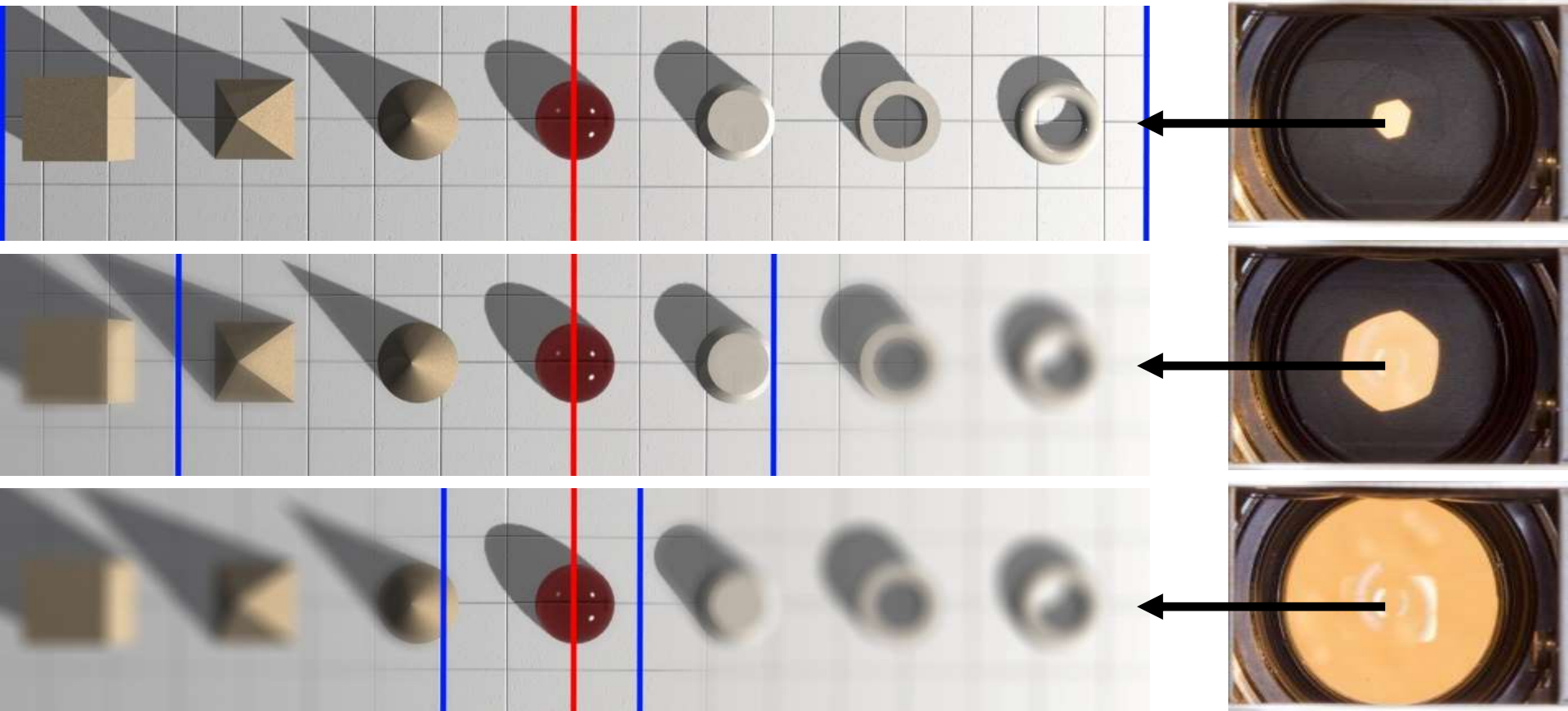
- Depth of Field = The Zone of Acceptable Sharpness

## SHALLOW DEPTH OF FIELD

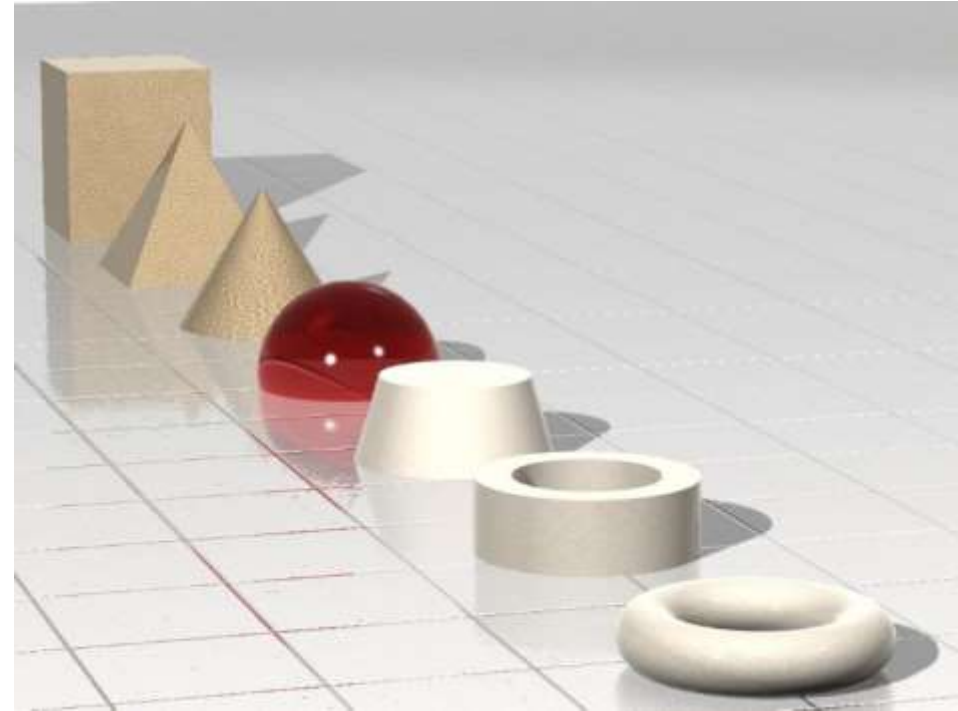
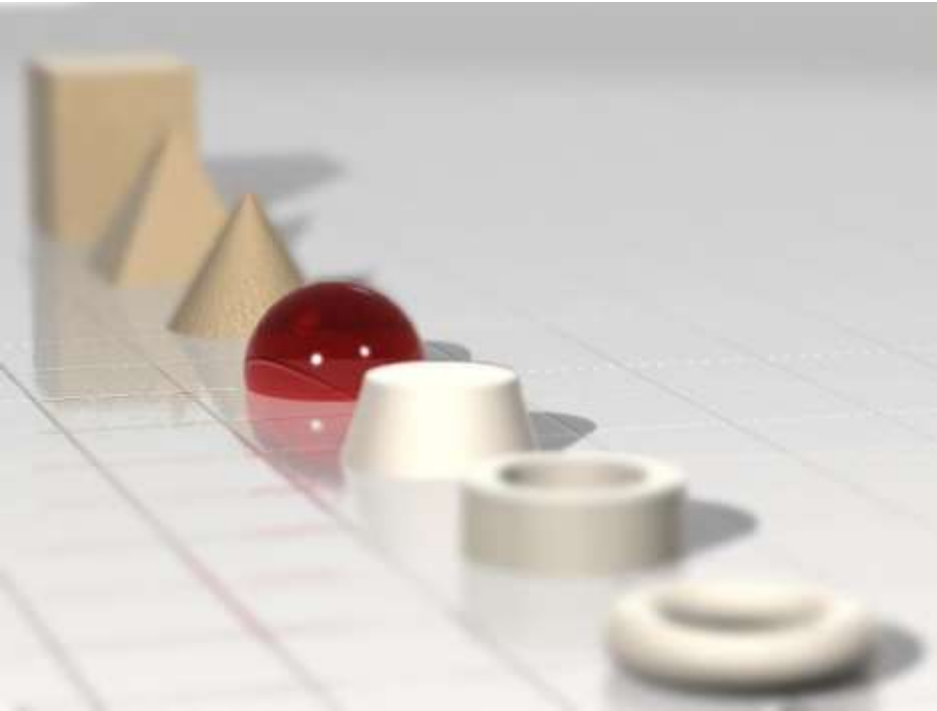


# Photographic Fundamentals

- **Depth of Field** = The Zone of Acceptable Sharpness
  - The wider the aperture the **SHALLOWER** the D.O.F.
  - The D.O.F. is not centered, but shifted **AWAY** from focal point



# Shallow D.O.F. vs Deep D.O.F.



# Deep D.O.F.





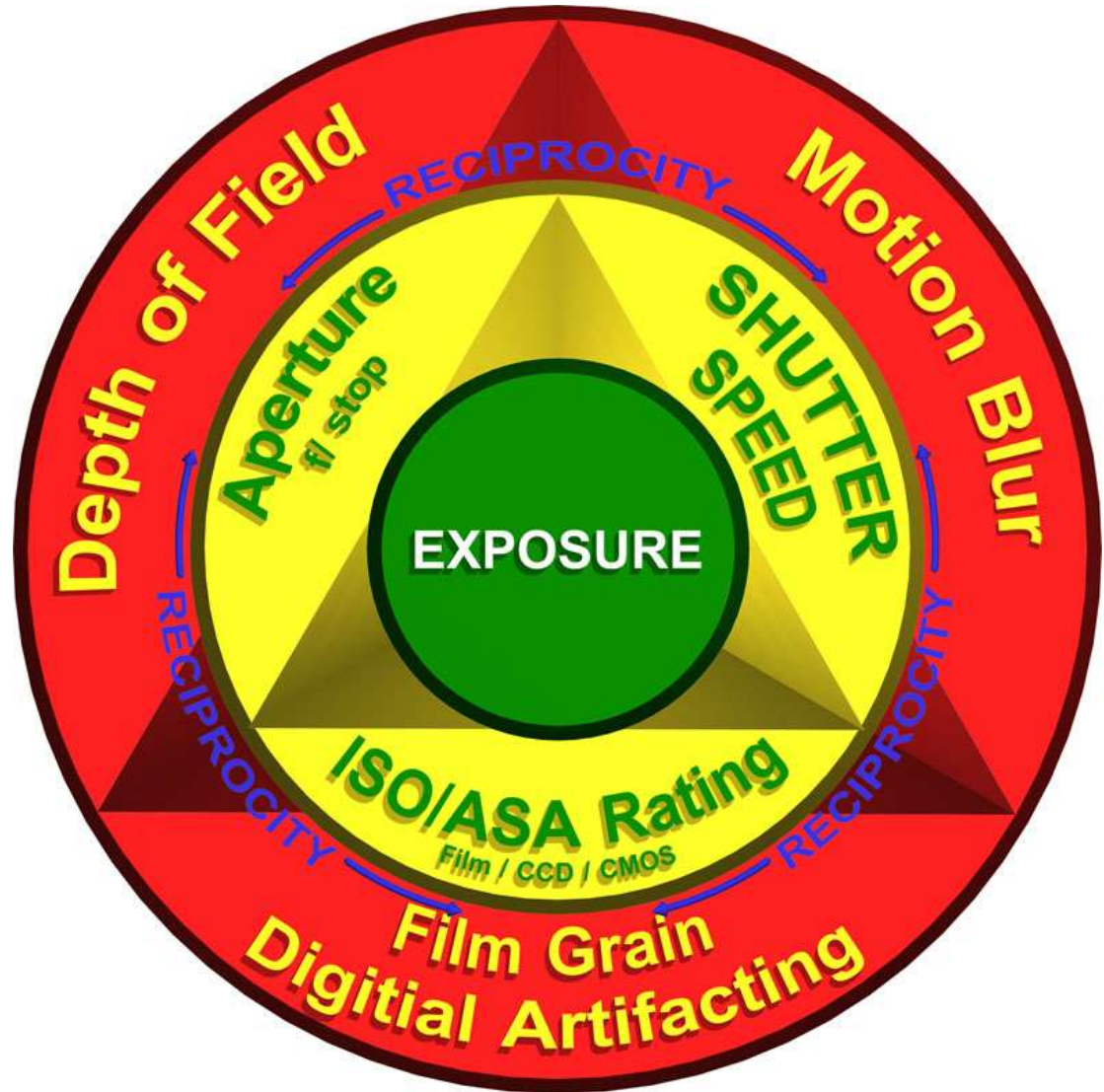
# Shallow D.O.F.





# Photographic Fundamentals

Controlling this triad of exposure and the image challenges that go with it is critical to acquire good images.



# Photographic Fundamentals

## DEMONSTRATION

- D.O.F.
- Focus
- Reciprocity
- Equivalent Exposures

# Photographic Fundamentals

- The following sequence of images demonstrate this **triad** concept of
  - Reciprocity
  - as well as controlling Depth of Field.
  - SAME TOTAL EXPOSURES
- The camera was fixed on a tripod
- The focus locked on the **Green Bur Box**
- ISO locked at **100.**

# D.O.F. Demo Sequence

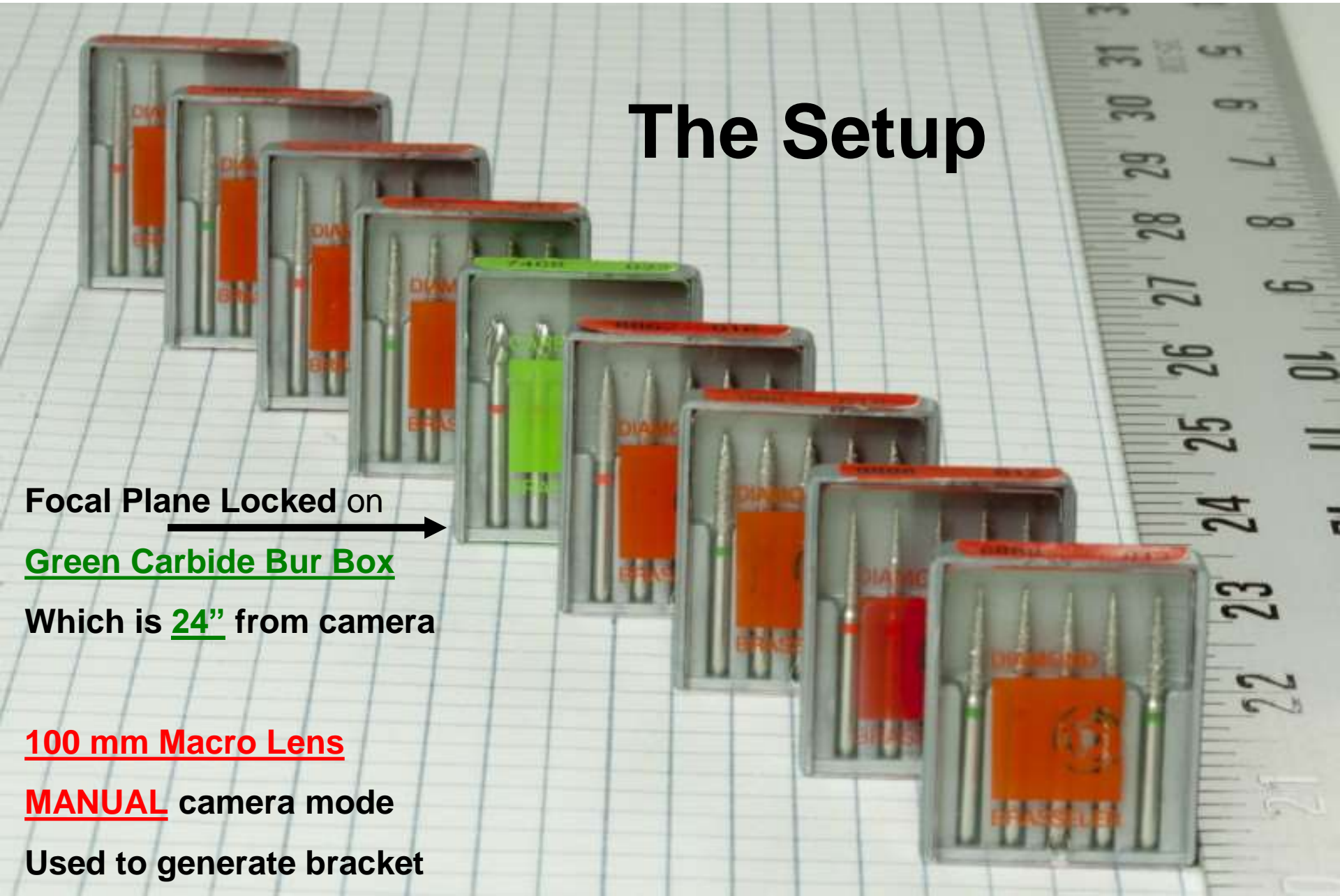
## The Setup

Focal Plane Locked on  
→  
Green Carbide Bur Box  
Which is 24" from camera

100 mm Macro Lens

MANUAL camera mode

Used to generate bracket





# D.O.F. Demo Sequence

01

Bracket START

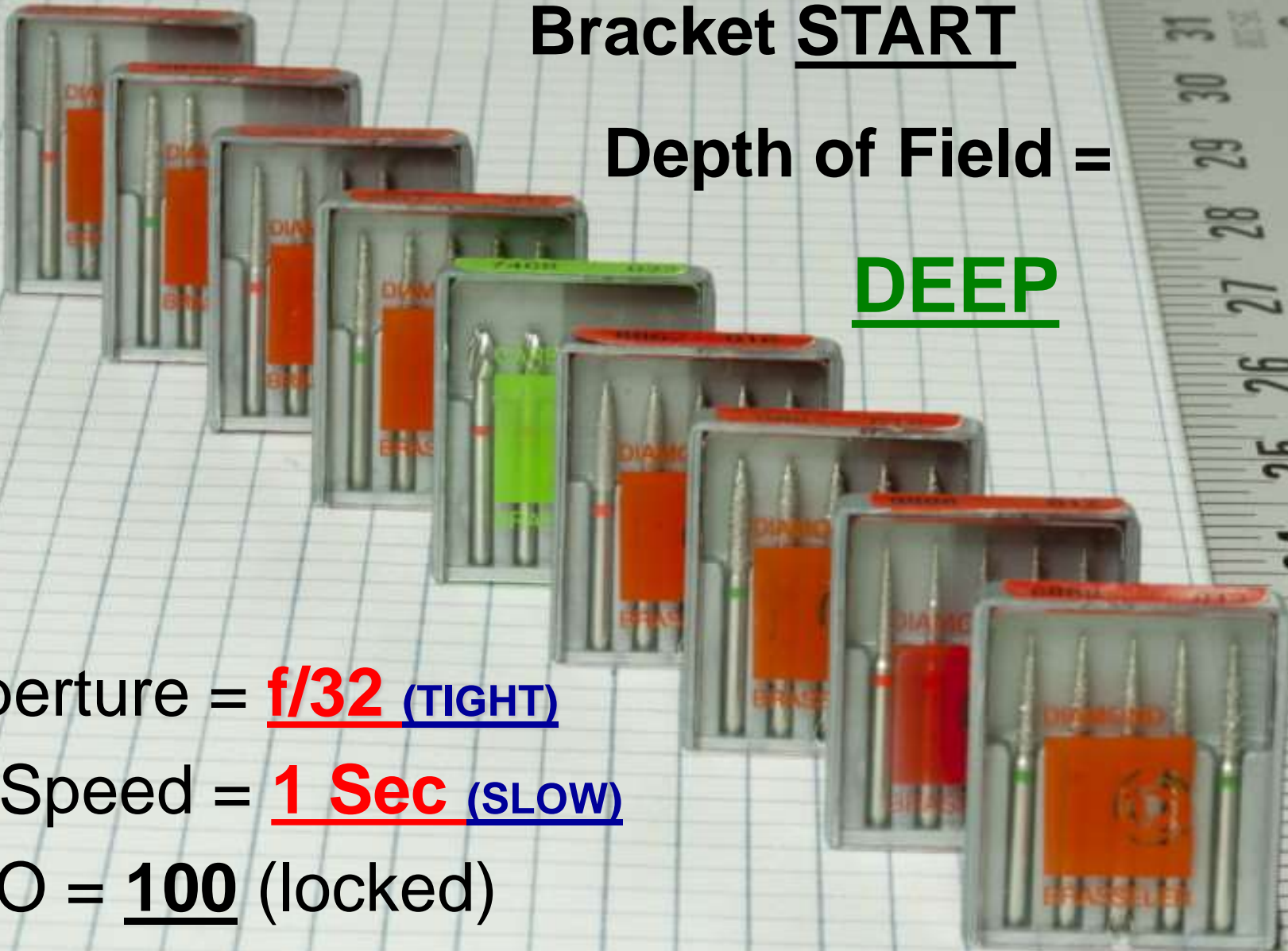
Depth of Field =

DEEP

Aperture = f/32 (TIGHT)

S-Speed = 1 Sec (SLOW)

ISO = 100 (locked)



# D.O.F. Demo Sequence

22

Bracket END

Depth of Field =

SHALLOW

Aperture = f/2.8 (OPEN)

S-Speed = 1/125 Sec (FAST)

ISO = 100 (locked)



# D.O.F. Demo Sequence

01

Bracket START

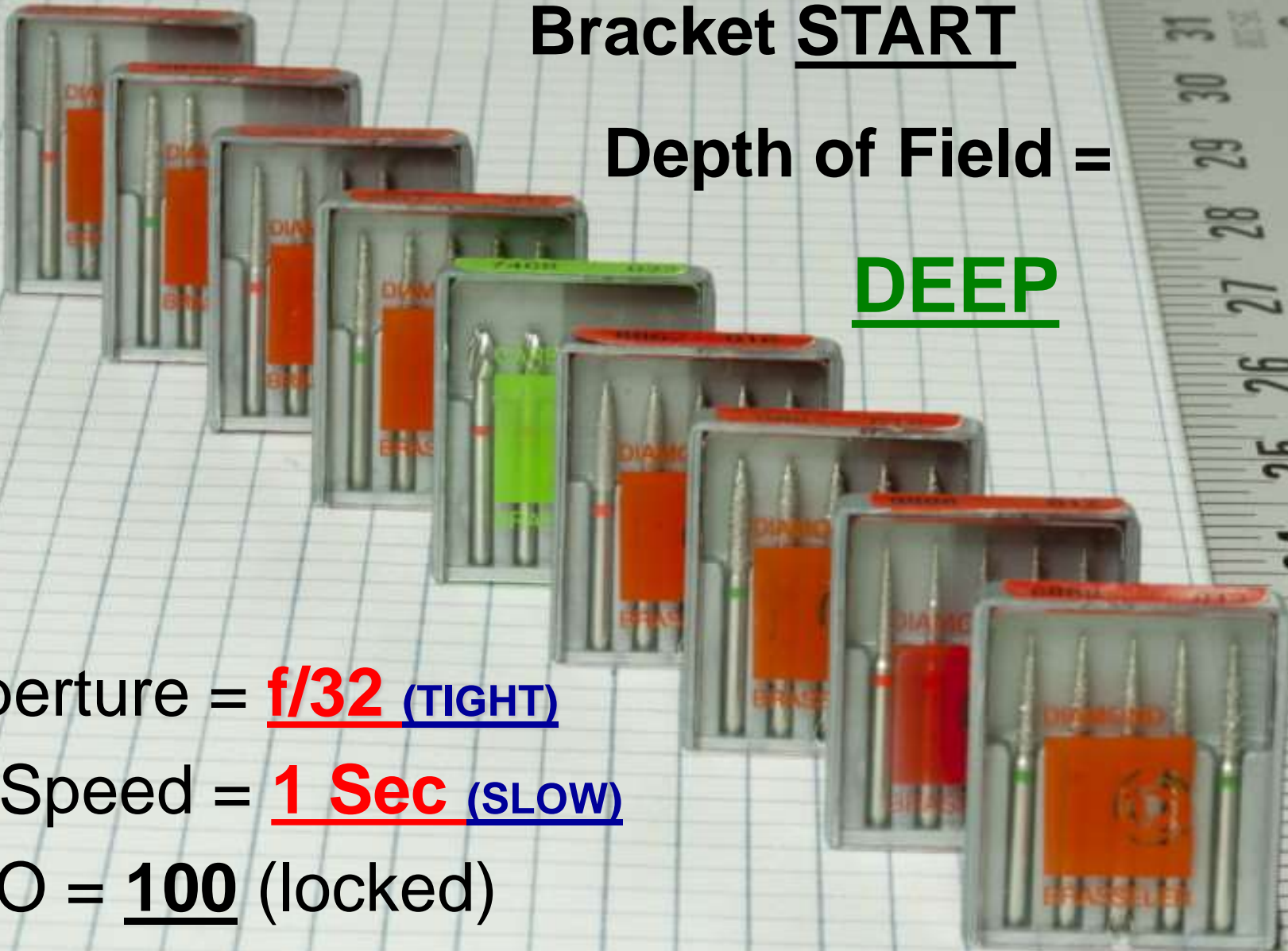
Depth of Field =

DEEP

Aperture = f/32 (TIGHT)

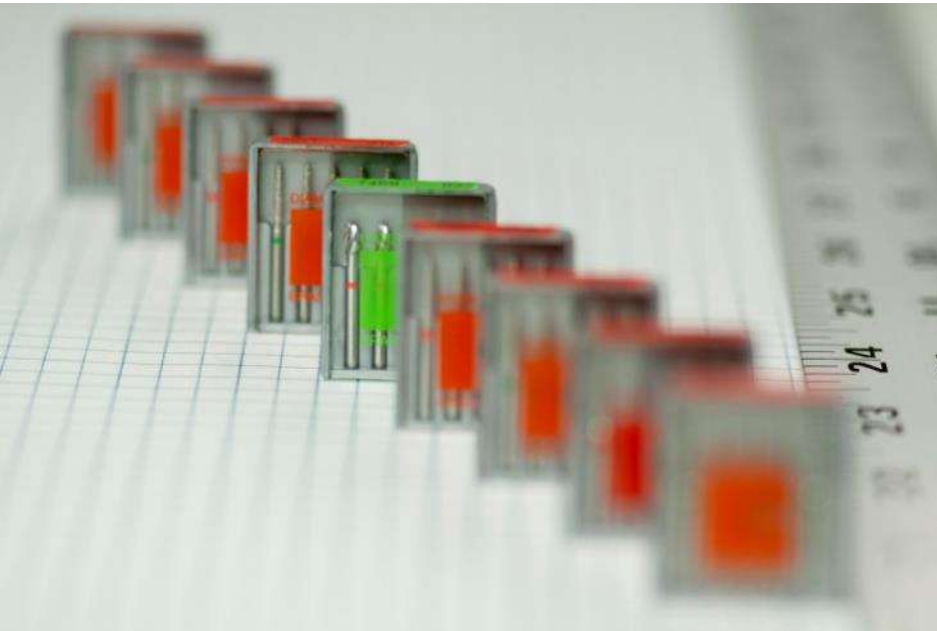
S-Speed = 1 Sec (SLOW)

ISO = 100 (locked)

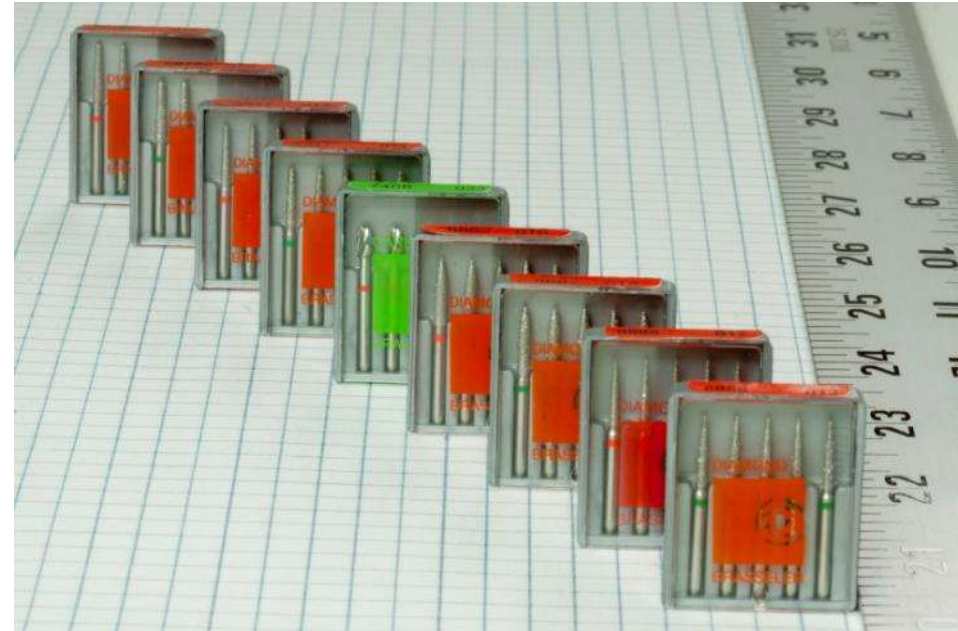


# D.O.F. Demo Sequence

SHALLOW



DEEP

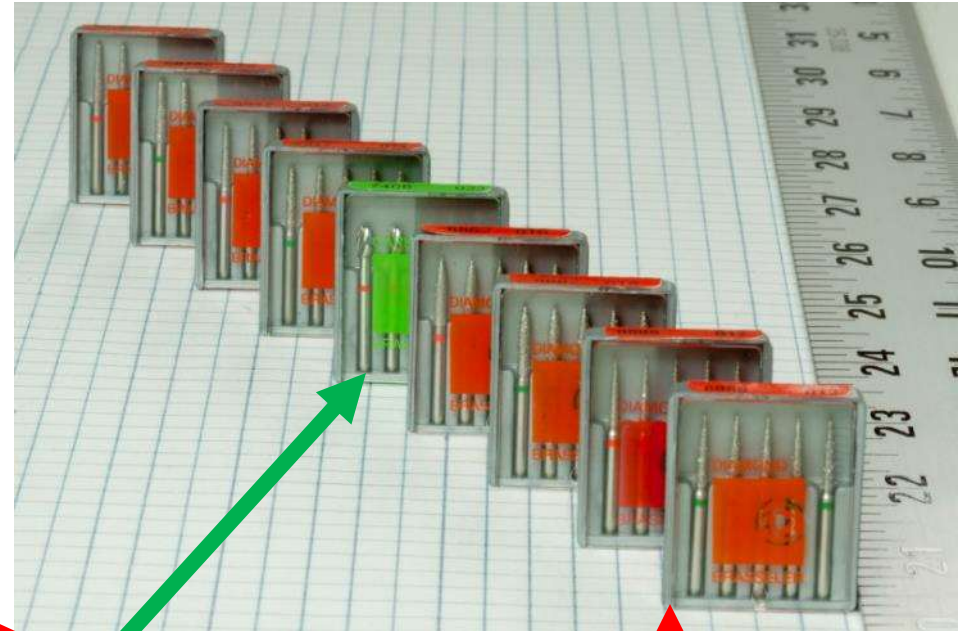
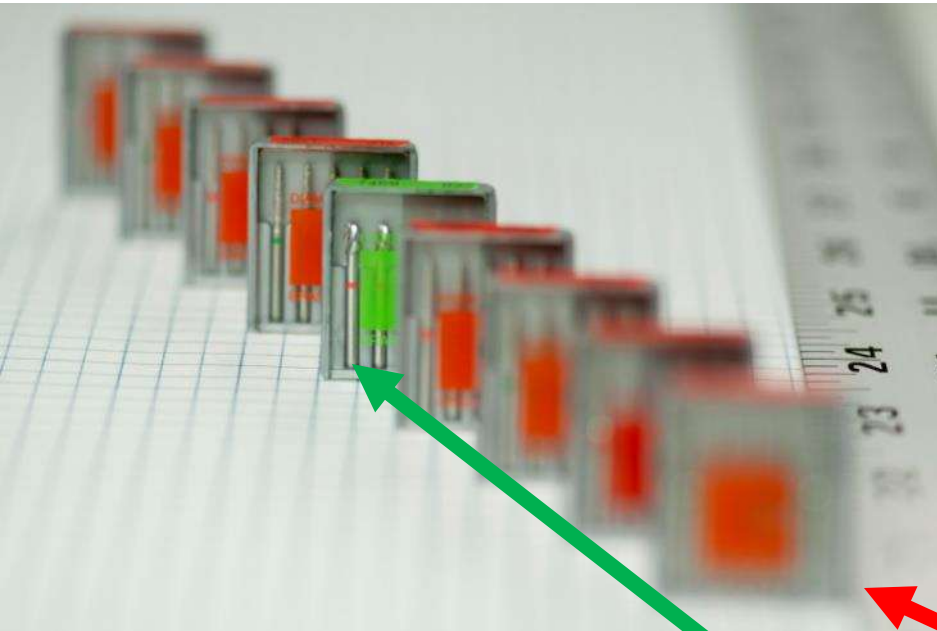


- Focal Distance = SAME
- Depth of Field = DIFFERENT!

# D.O.F. Demo Sequence

SHALLOW

DEEP



- Focal Distance = SAME
- Depth of Field = DIFFERENT!

# Photographic Fundamentals

- So by opening the aperture and speeding up the shutter speed by the same increment over this series of shots the depth of field gets shallower and shallower.
- These are all equivalent exposures with a **different visual result!**
- That is a crucial concept to understand!

# Photographic Fundamentals

- Definition

**Depth of Field** = The zone of distance in a photograph that is considered **in focus** and appears **sharp**.

Focus is set in an image at a **DISTANCE** from the lens, and that distance is called the **FOCAL PLANE**, and the **depth of space(field)** in that image that is sharp is impacted by:

**Wider Aperture = Shallower Depth of Field**

(We work in a dark clinic)

**Closer Subject = Shallower Depth of Field**

(We work inside someone's mouth)

**Longer Lens = Shallower Depth of Field**

(We have multiplied lens factors)





# Photographic Fundamentals



- Fundamental Concepts we all should know

EVERY camera has three fundamental components

A **LENS** with an **APERTURE**

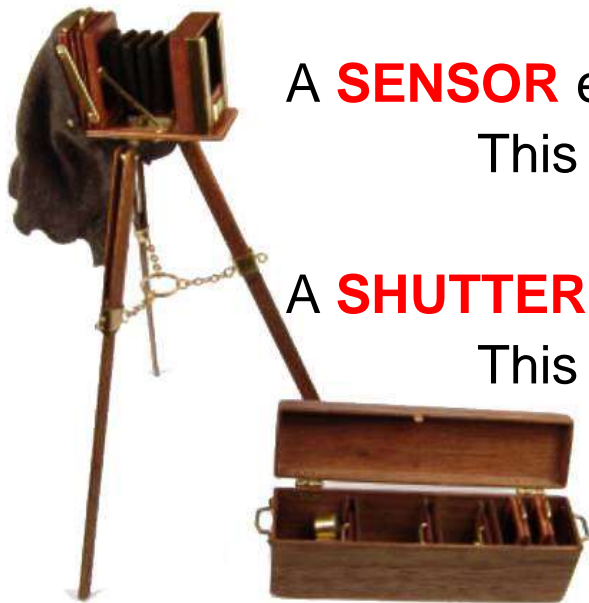
This gathers and directs light into the camera

A **SENSOR** either **FILM** or **DIGITAL**

This captures and records the image

A **SHUTTER** which is **GATE** in front of the sensor

This opens and closes allowing the light to pass in





# Photographic Fundamentals

- Fundamental Concepts we all should know

## Camera Controls – SHOOTING MODES



**M** = Manual Mode  
You choose **ALL**- ISO/Aperture/S.Speed

**Av** = Aperture Value or Aperture Preferred Mode  
You choose ISO/Aperture

**Tv** = Time Value or Shutter Speed Preferred Mode  
You choose ISO/**Shutter Speed**

**P** = Program Mode (Rookie Mode)  
The camera controls almost everything

 = Point-n-Shoot Mode (Idiot Mode)  
The camera controls everything

# Photographic Fundamentals

- Fundamental Concepts we all should know



## SHOOTING MODES

## OTHER MODES and ICONS

Basically all you need to know about these is that these settings are **NOT magic**, but just preset combinations that are generally good for certain situations.

# Photographic Fundamentals



- Fundamental Concepts we all should know

## SHOOTING MODES

### Macro



For Point-&-Shoots and entry level SLRs this **FLOWER** icon is the universal symbol for

**MACRO MODE.**

This mode puts the camera into the CLOSE FOCUS mode.

# Photographic Fundamentals

- Fundamental Concepts we all should know



## SHOOTING MODES



## FLASH



Auto  
Flash



Flash  
On



Flash  
Off

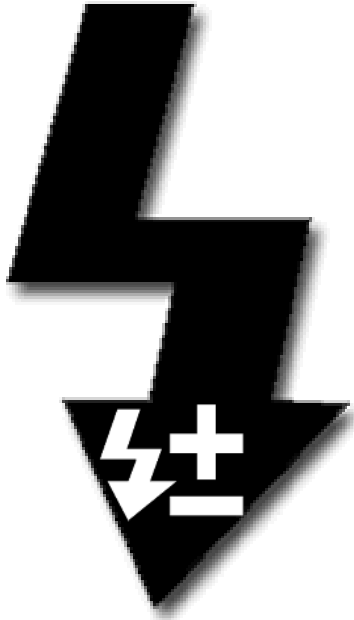
This **LIGHTNING** icon is the universal symbol for

**FLASH & FLASH MODE.**

This controls Auto/On/Off of internal flash, as well as indicates the button that opens it.



# Photographic Fundamentals

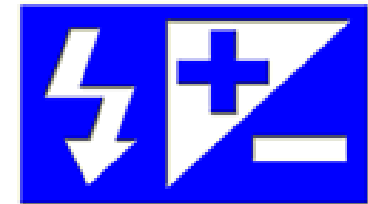


- Fundamental Concepts we all should know



## SHOOTING MODES

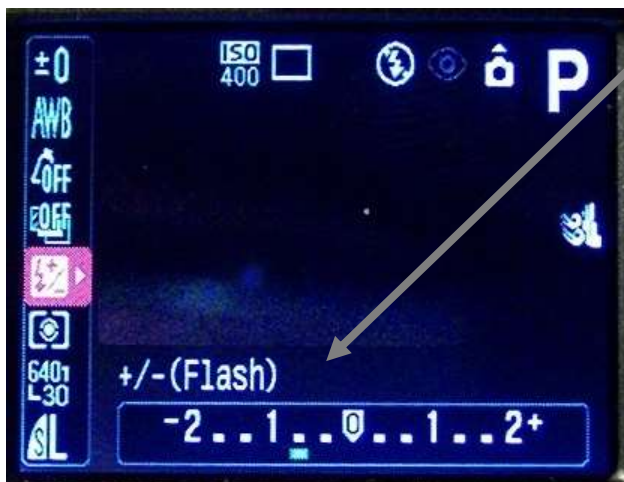
### FLASH



This **LIGHTNING** icon is the universal symbol for

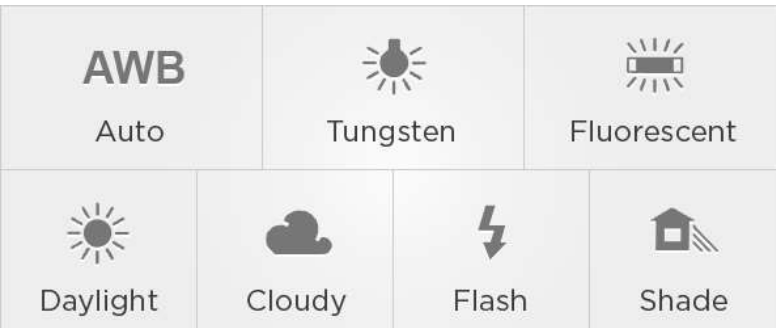
**FLASH COMPENSATION.**

This controls how much **POWER** is sent to the flash. This can be turned up to get more light.



# Photographic Fundamentals

- Fundamental Concepts we all should know












## SHOOTING MODES

## WHITE BALANCE

This sets the base  
COLOR TEMPERATURE in KELVINS  
Based on what temp makes white  
appear white in shots taken in the  
different types of light available.



# Photographic Fundamentals

WB SETTINGS	COLOR TEMPERATURE	LIGHT SOURCES
	10000 - 15000 K	Clear Blue Sky
	6500 - 8000 K	Cloudy Sky / Shade
	6000 - 7000 K	Noon Sunlight
	5500 - 6500 K	Average Daylight
	5000 - 5500 K	Electronic Flash
	4000 - 5000 K	Fluorescent Light
	3000 - 4000 K	Early AM / Late PM
	2500 - 3000 K	Domestic Lightning
	1000 - 2000 K	Candle Flame



# Photographic Fundamentals



- Fundamental Concepts we all should know



## SHOOTING MODES

## WHITE BALANCE



# Photographic Fundamentals



- Fundamental Concepts we all should know



## SHOOTING MODES

## FOCUS Control

This **GRID** icon or similar is the symbol for

### AUTO FOCUS POINT

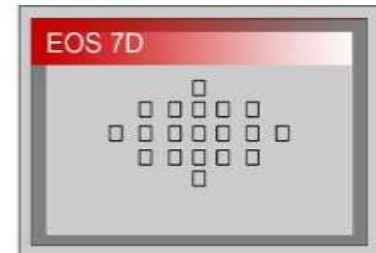
This controls how the camera decides the focal distance when the button is partially depressed.



# Photographic Fundamentals

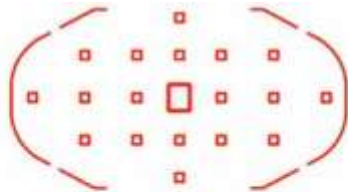


- Fundamental Concepts we all should know



## SHOOTING MODES

## FOCUS Control

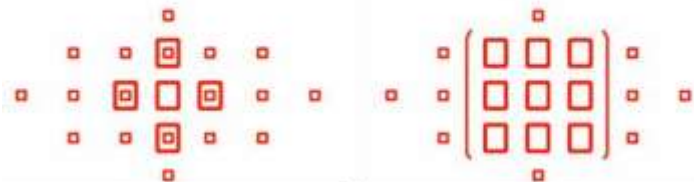


Default Setting: Automatic AF Point Selection



Single AF

Spot AF



AF Expansion

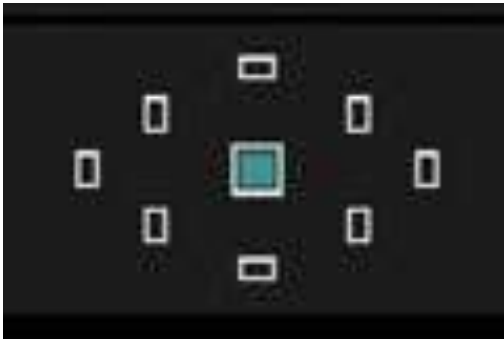
Zone AF

This **GRID** icon or similar is the symbol for

**AUTO FOCUS POINT**

These grids vary greatly by manufacturer and from camera to camera.

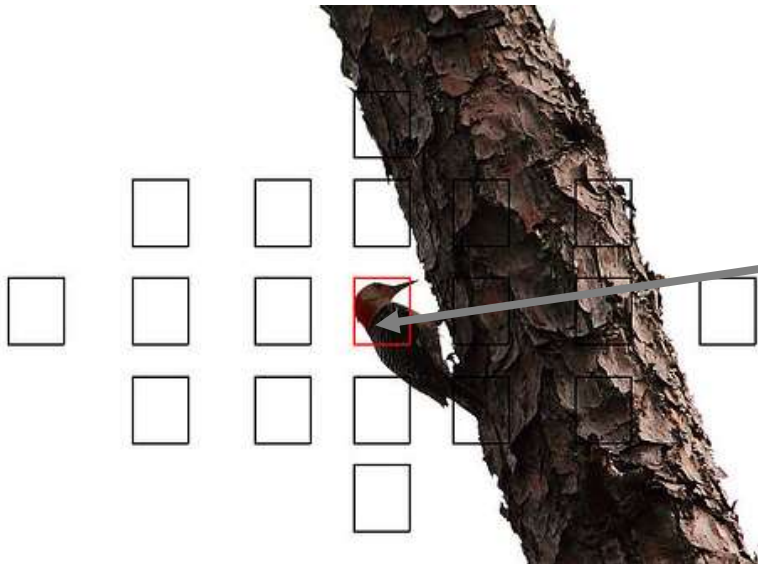
# Photographic Fundamentals



- Fundamental Concepts we all should know

## SHOOTING MODES

## **FOCUS Control**



For shooting teeth I prefer to use

**SPOT or Center Weighted**

This lets you force the focus at a specific target, then reframe before shooting if necessary.



# Photographic Fundamentals

- Fundamental Concepts we all should know



## SHOOTING MODES

## FOCUS Control

The newest feature is

### Eye Focus

This lets you force the focus at a specific target, then reframe before shooting if necessary.





# Photographic Fundamentals

– What is a histogram?

# Photographic Fundamentals

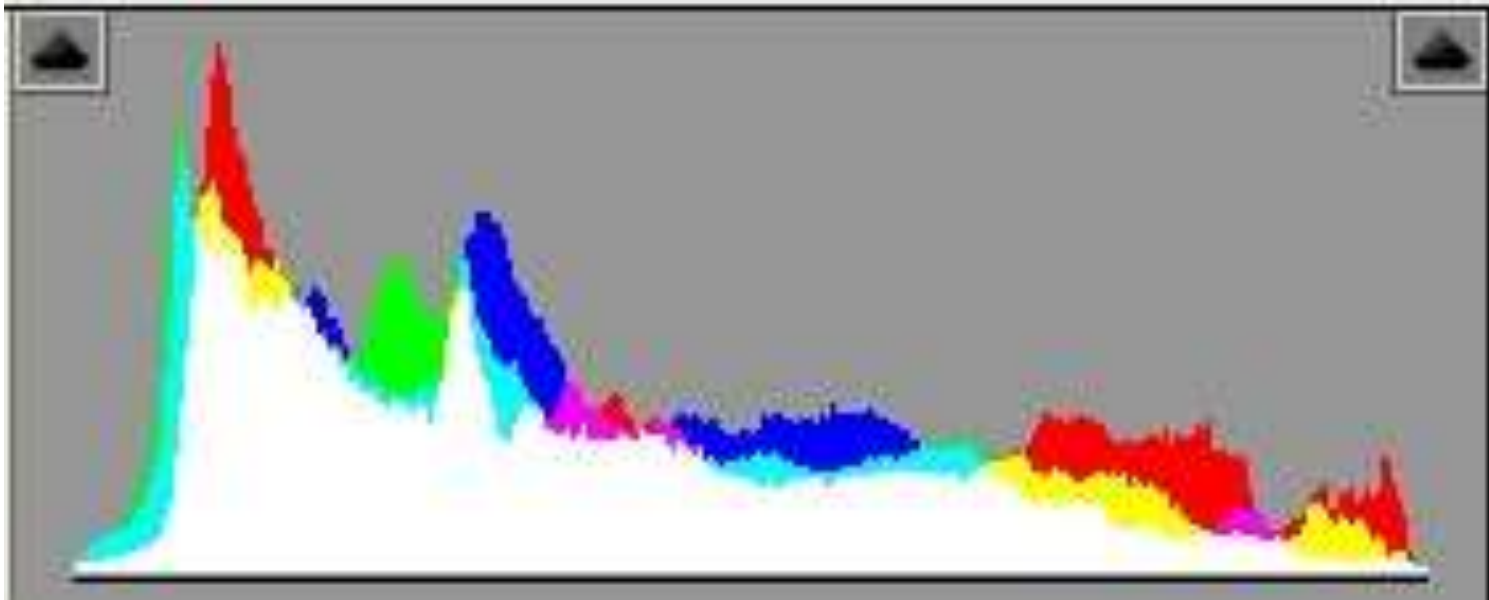
## – What is a histogram?

- A HISTOGRAM is a visual graphical representation of the distribution of the variety and amount of **TONES** in an image.
- So in other words, IT IS A GRAPH OF ALL OF THE INFORMATION IN AN IMAGE.

# Photographic Fundamentals

## – What is a histogram?

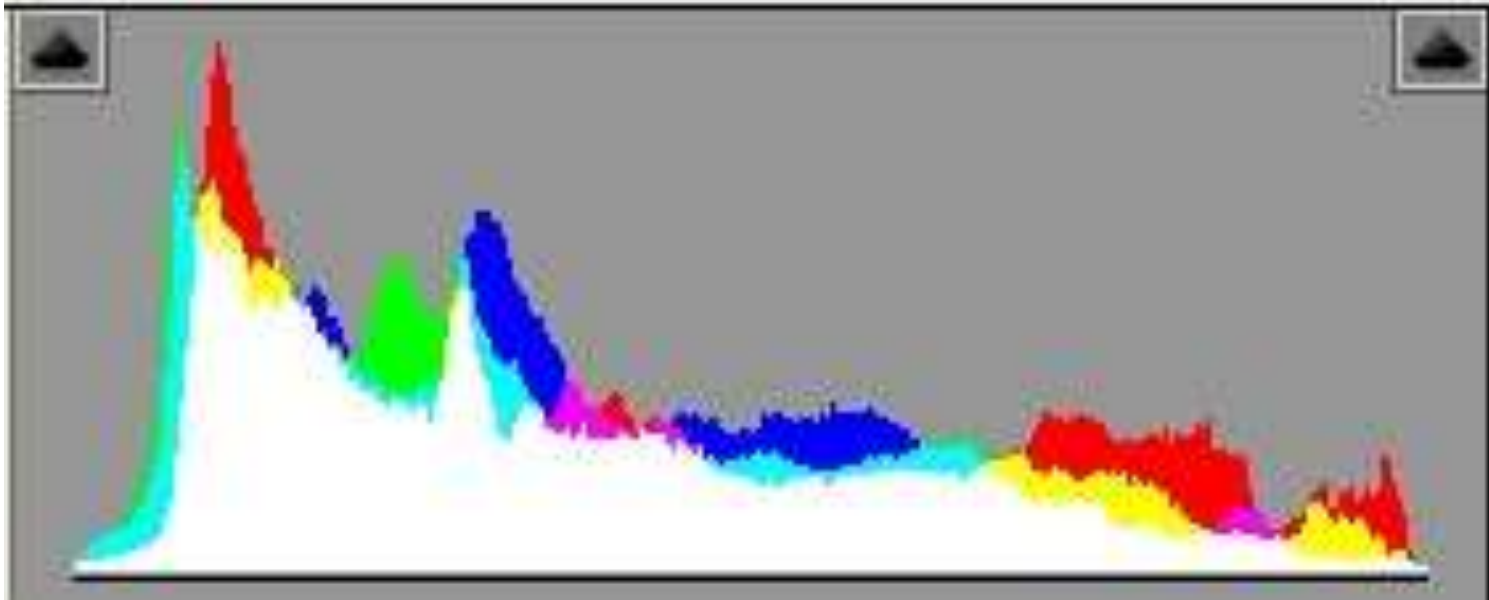
- Left side is **DARKS** and **SHADOWS**
- Right side is **HIGHLIGHTS** and **REFLECTIONS**
- Amplitude is the **Intensity/Quantity** of each tone



# Photographic Fundamentals

## – What is a histogram?

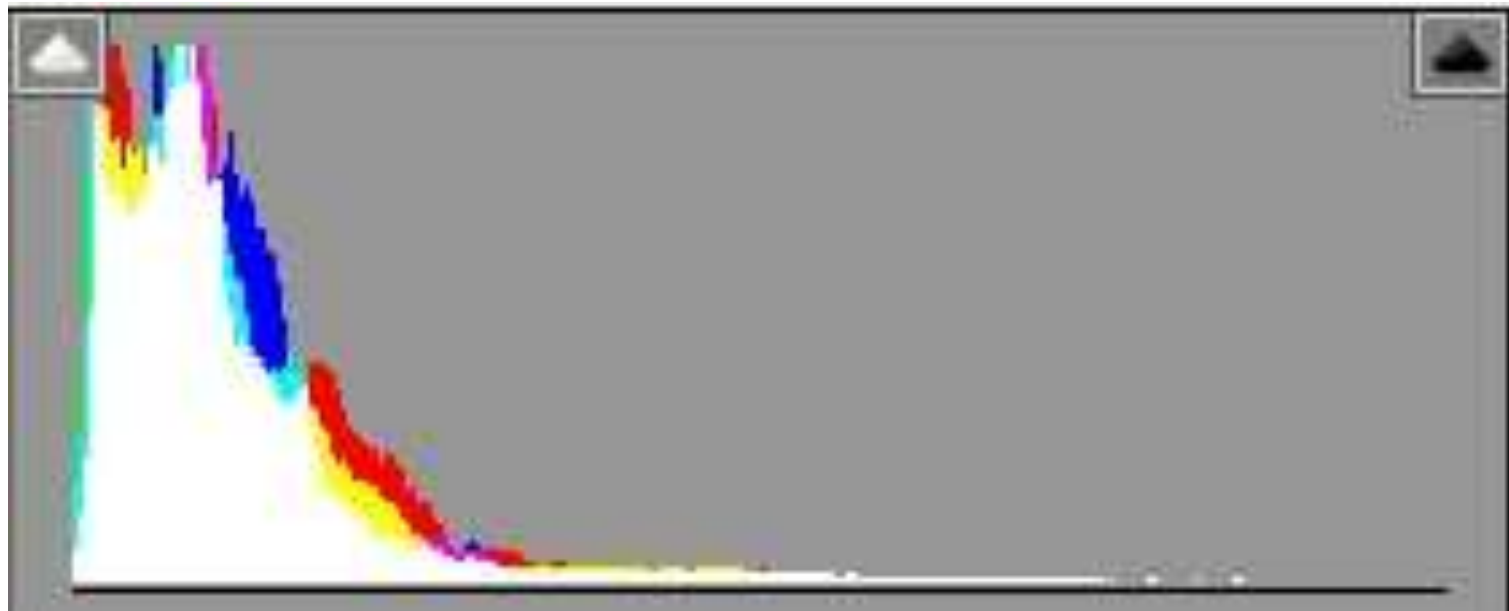
- A **GOOD** exposure will **fill the frame** baseline without running off the sides, like the one below



# Photographic Fundamentals

## – What is a histogram?

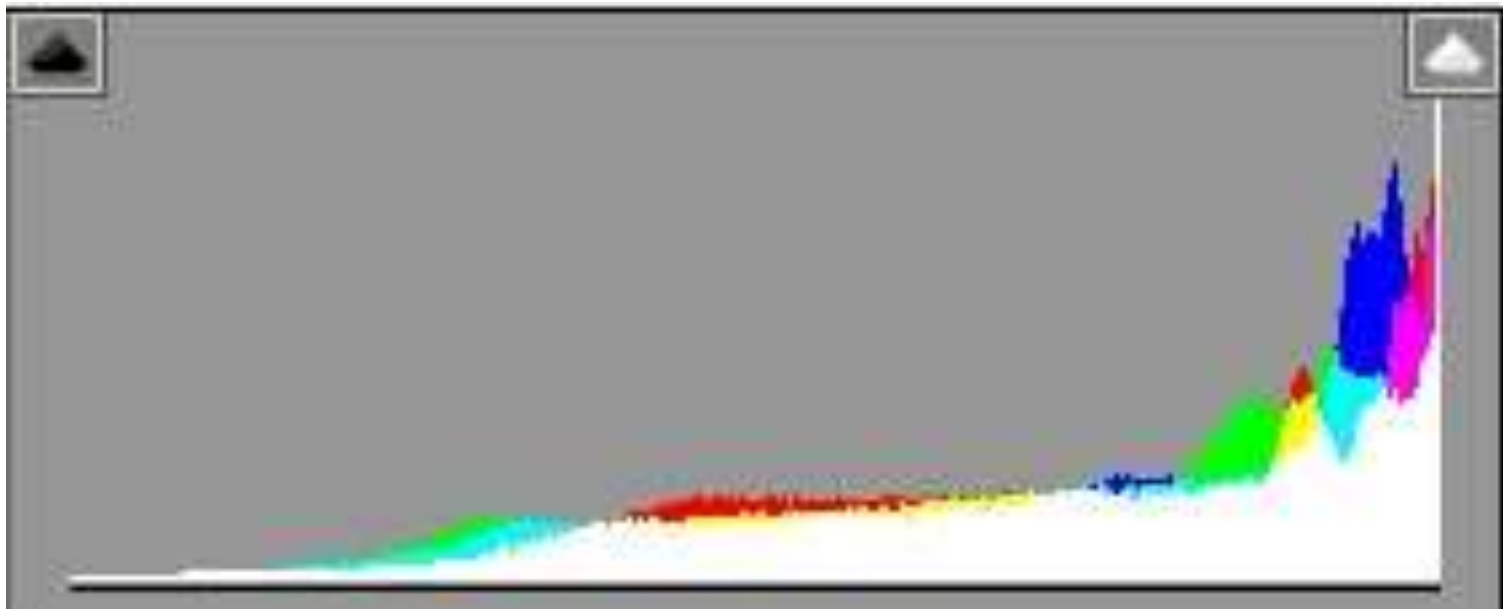
- This image is UNDEREXPOSED
- Data is **LOST OFF THE LEFT (DARK) SIDE** and the right side baseline is empty



# Photographic Fundamentals

## – What is a histogram?

- This image is OVEREXPOSED
- Data is **LOST OFF THE RIGHT (LIGHT) SIDE** and the left side baseline is empty

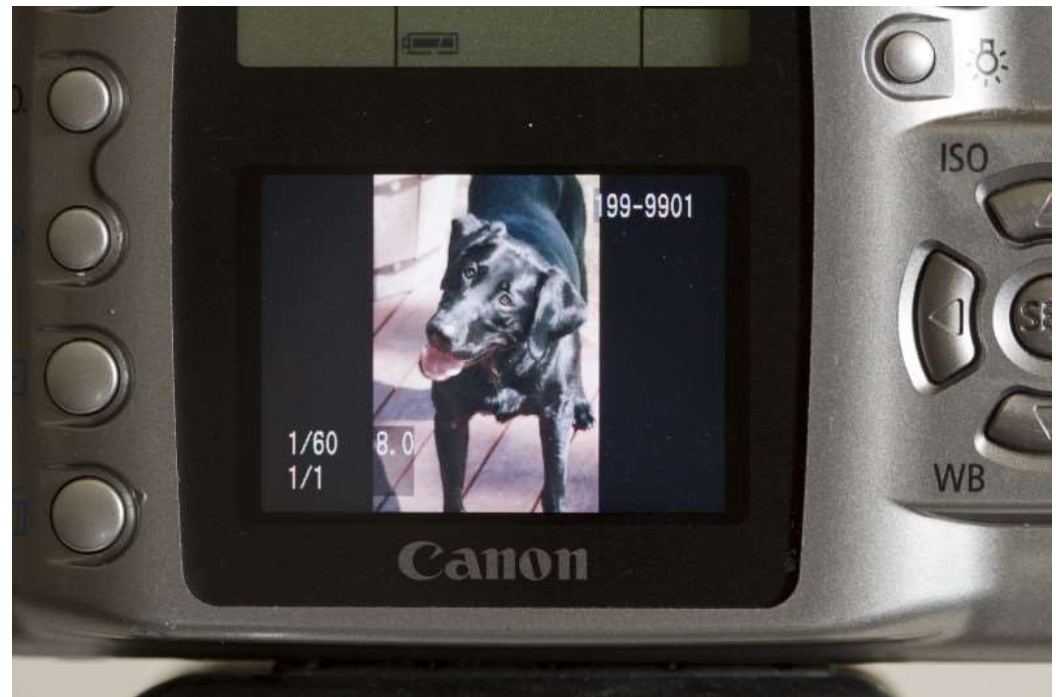




# Photographic Fundamentals

## – Histogram Example

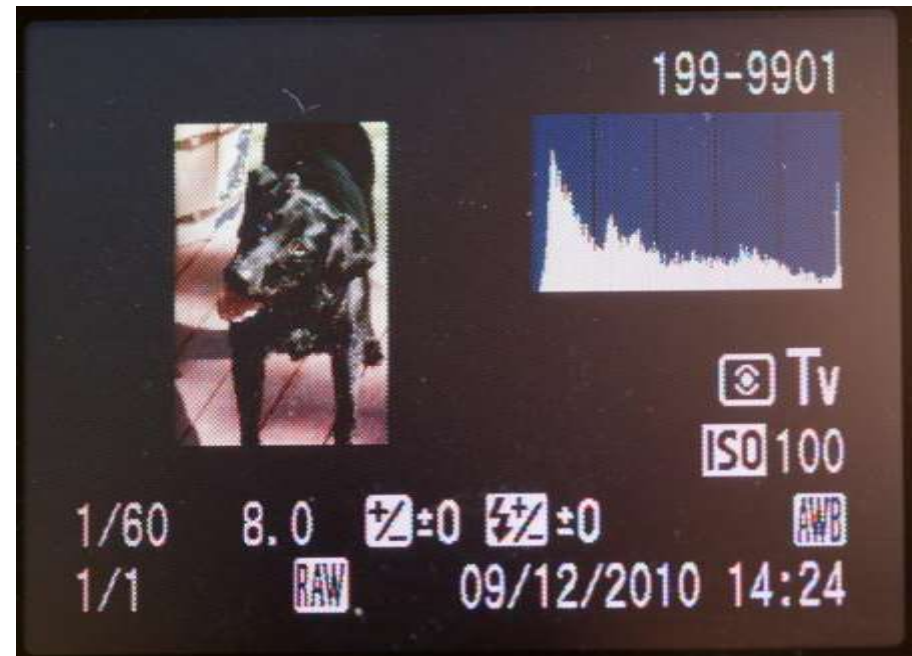
- This image of my dog I snapped in the back yard
- The histogram you saw was from this shot



# Photographic Fundamentals

## – Histogram Example

- These images are of the Camera View Screen
- You can use this **information in the field** to judge your exposures and your desired effect



# Photographic Fundamentals

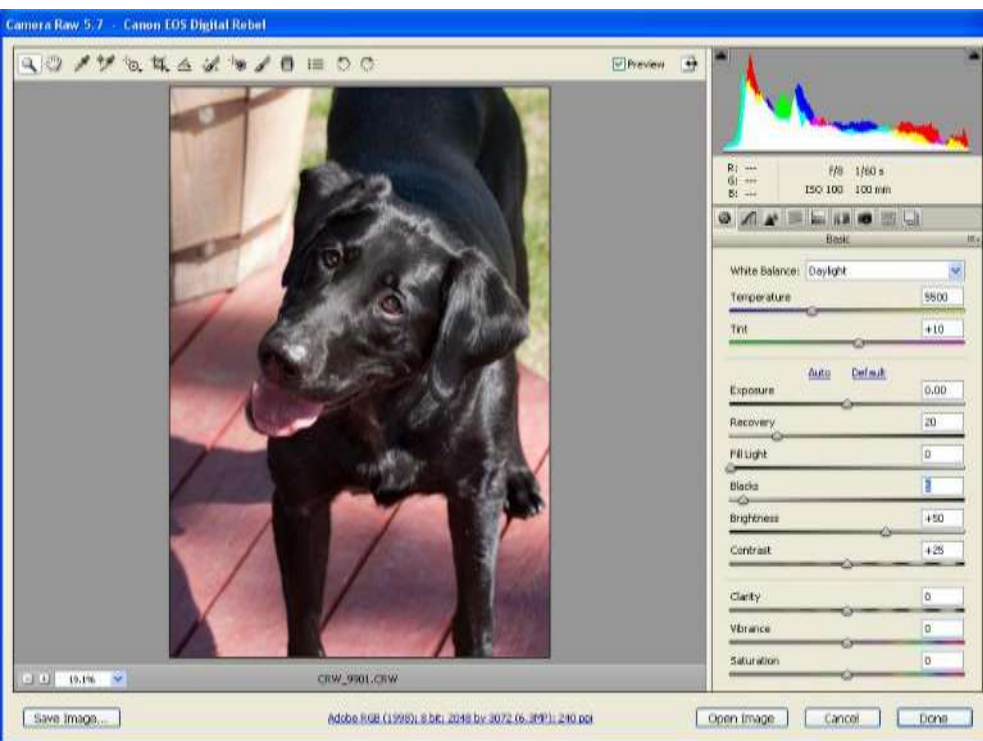
## – Histogram Example

- This is a screen capture from Adobe Bridge
- This software can **ADJUST THE EXPOSURE**

of RAW image files  
but NOT JPGs

This can be a very  
powerful tool in creating  
good presentations.

I store both RAW + JPG

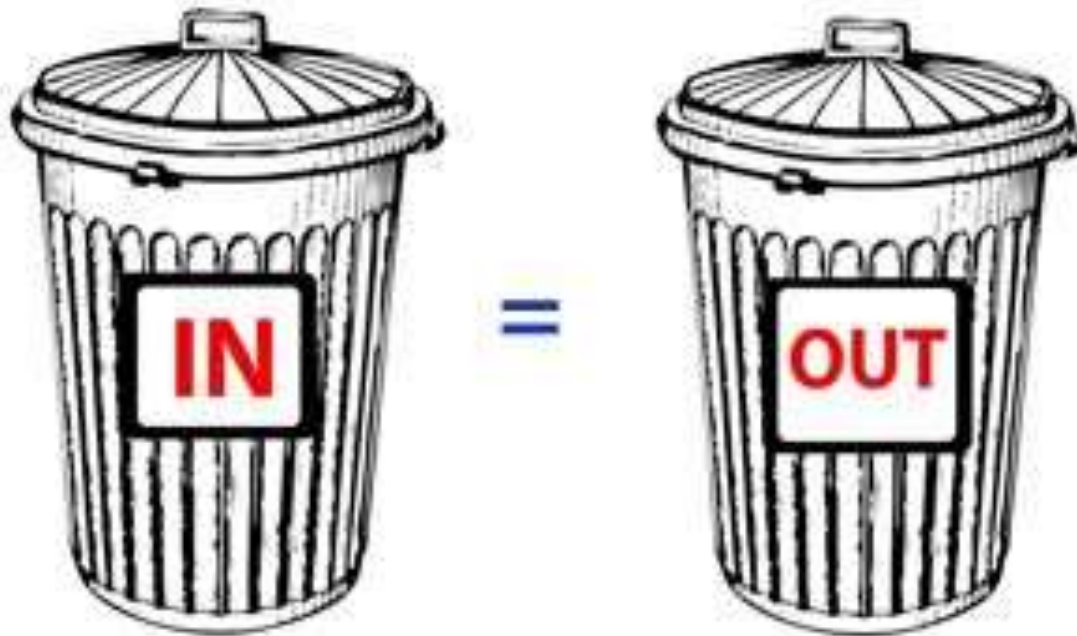


# Photographic Fundamentals

## – Adjusting IMAGE QUALITY

If you put  
**GARBAGE IN**

You can only get  
**GARBAGE OUT**



# Photographic Fundamentals

## – Adjusting IMAGE QUALITY

If you don't **GET IT IN CAMERA**  
when you push the button,  
you cannot create it later





# Photographic Fundamentals

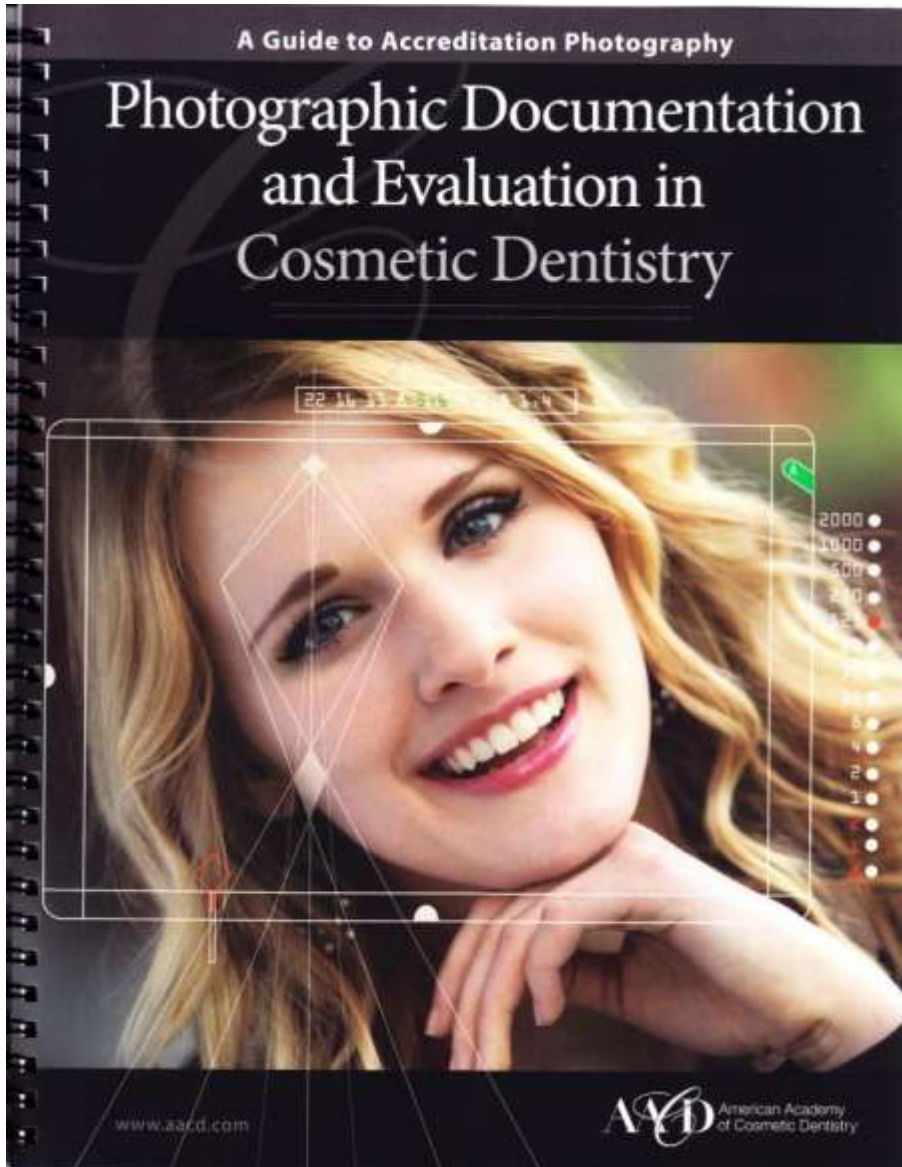
## – Adjusting IMAGE QUALITY

You can easily trim, crop, and flip in post, but **you CANNOT improve the quality in post**





# What photos to shoot?



- There are MANY different suggestions as to which photos to shoot on each pt.
- This is the AACD guide to Photos of aesthetic cases.

# What is a “Photo Essay”?

- Standardized set of photos that record the current esthetic and dental status of a patient
  - Facial
    - (rest, CO, normal smile, exaggerated smile)
  - Profile
    - (rest, CO, normal smile, exaggerated smile)
  - Anterior teeth
    - (relaxed, interdigitated)
  - Lateral views
    - (interdigitated, working & balancing)
  - Occlusal
    - views (maxillary and mandibular)

# What is a “Photo Essay”?





# What is a “Photo Essay”?



# Think About the Background

- Also prepare Background if you can.
  - What is seen BEHIND your pt can make a big difference in how professional they look.



For head shots a simple piece of black felt will work.



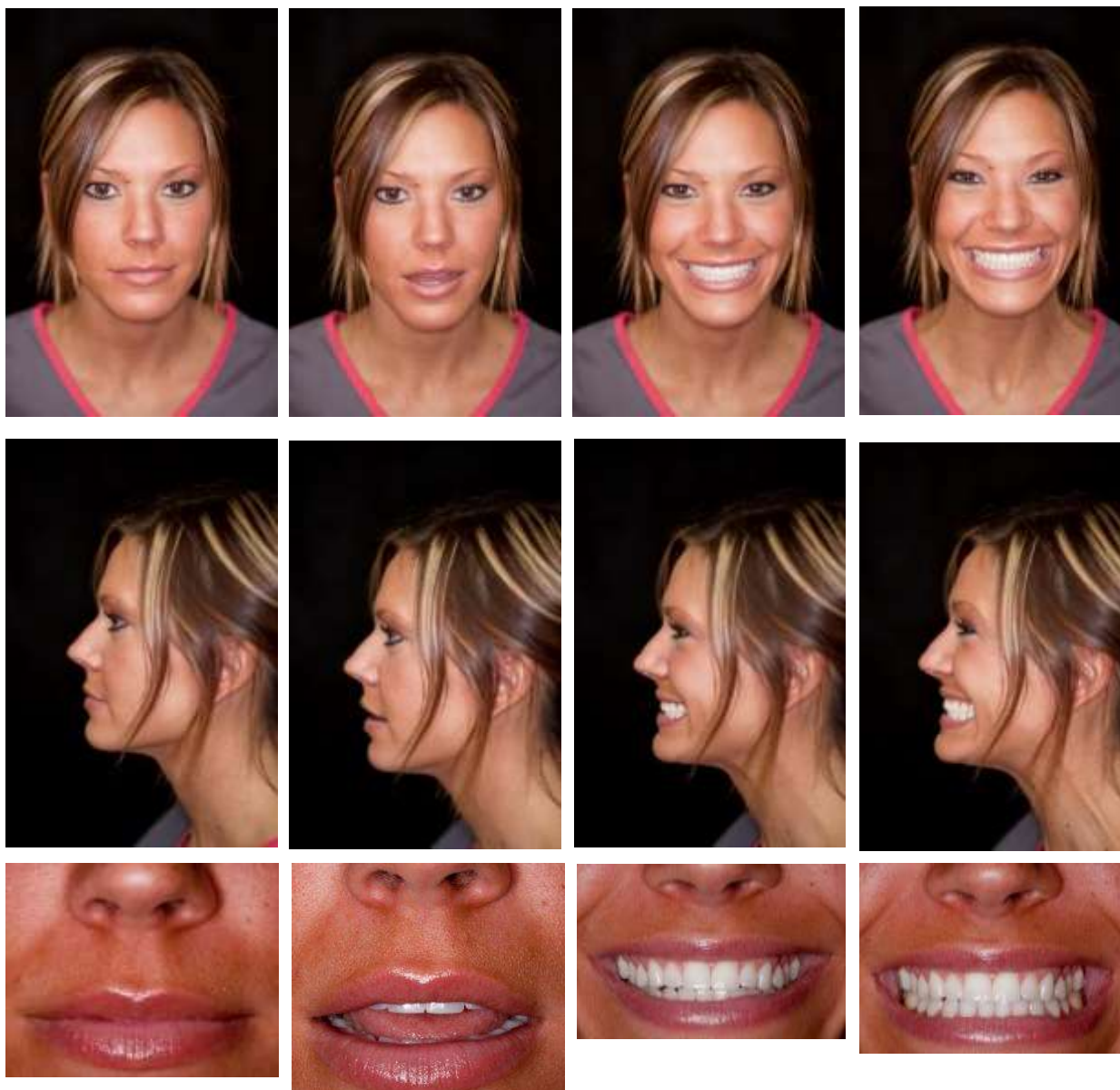
# Other Accessories

- Also prepare Background if you can.
  - This can be hung anywhere in the clinic





# What is a “Photo Essay”?



# What is a “Photo Essay”?



# **Photographic Positioning**

## **Full Face**

**Get the Pt away from the drop.**

**Fill the frame with Neck to forehead.**

**Focus on the LIPS and reframe if needed.**

# What is a “Photo Essay”?



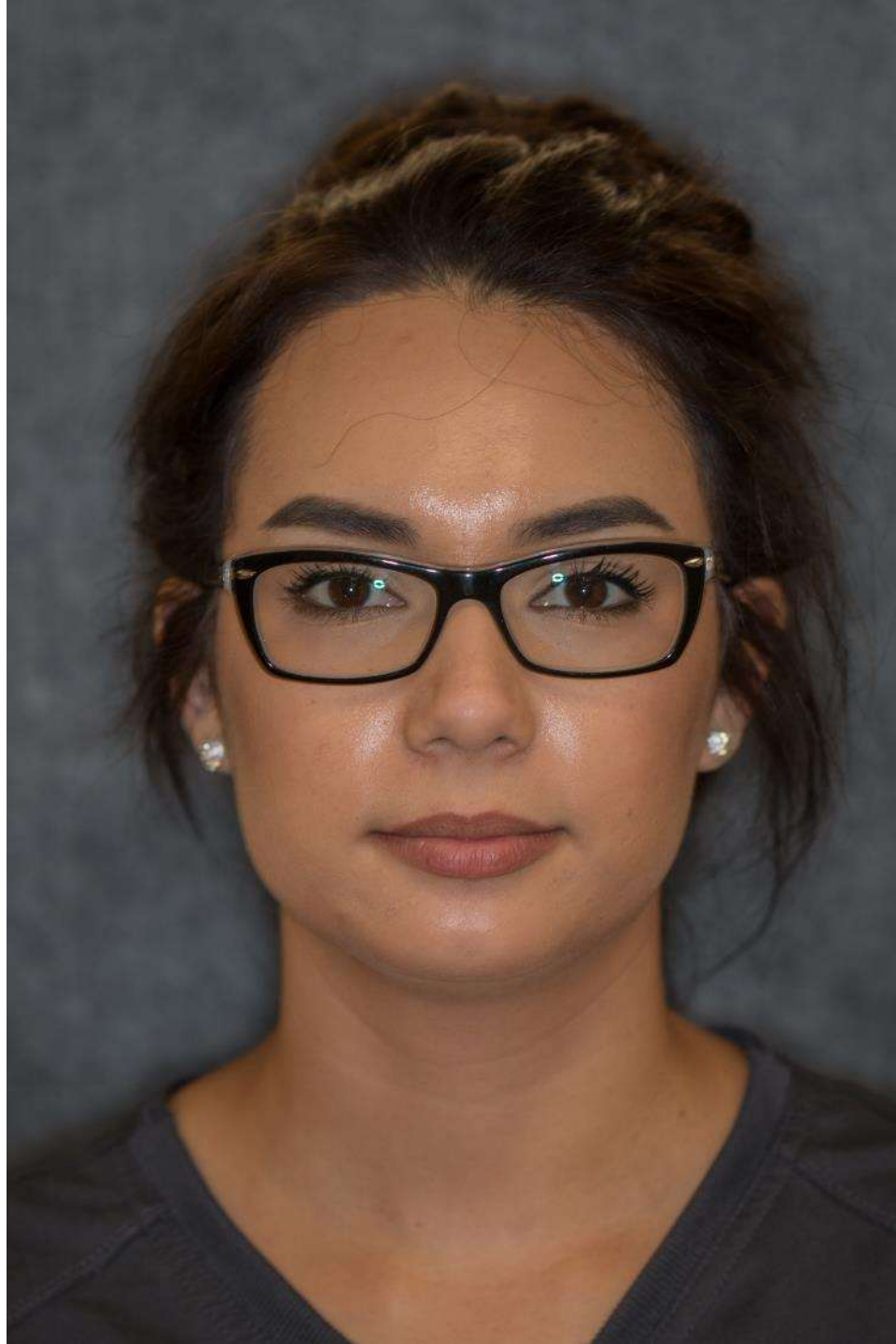


# “Photo Essay”

SHOT #: 1

Frontal Face

C.O.

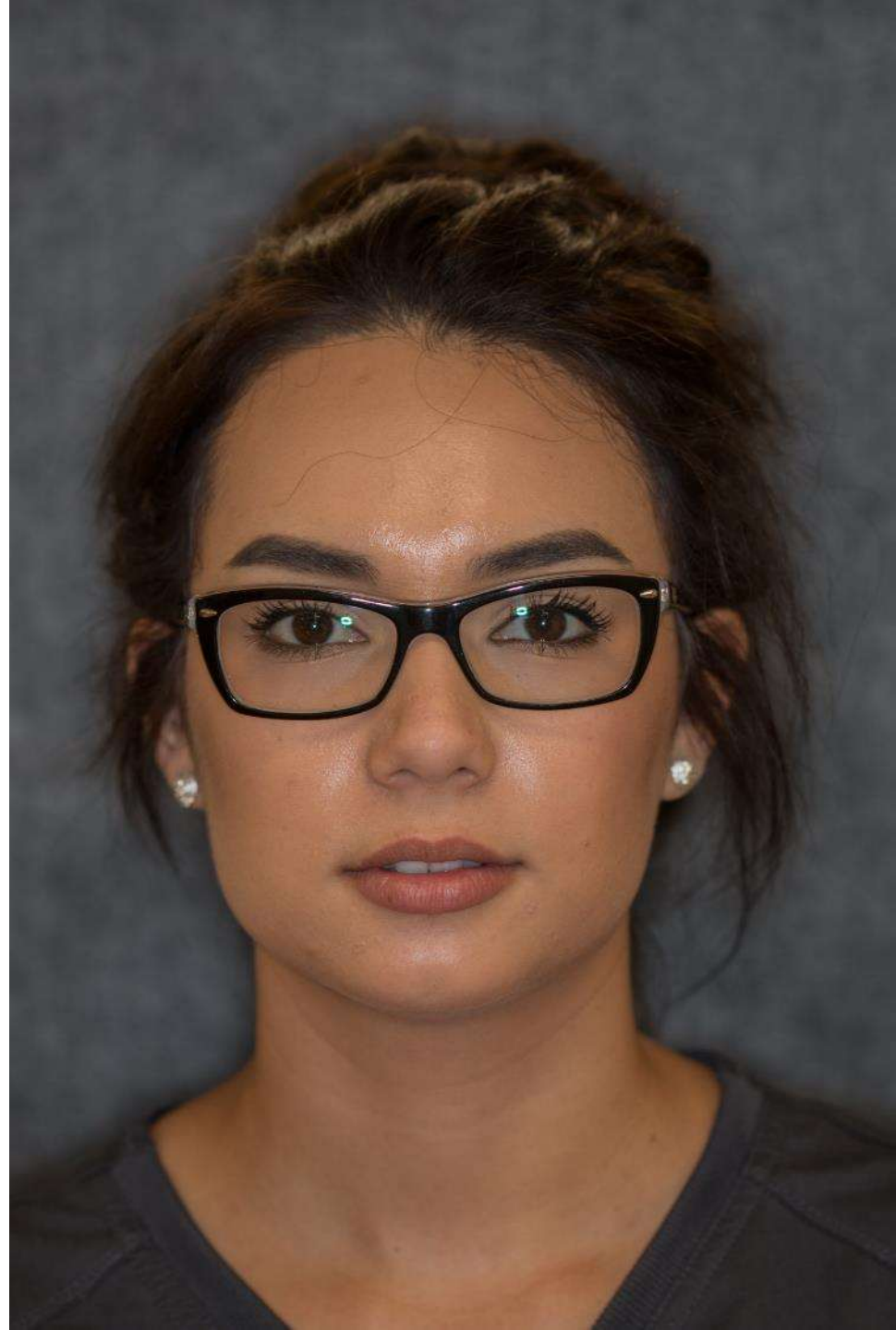


# “Photo Essay”

SHOT #: 2

Frontal Face

Relaxed





# “Photo Essay”

SHOT #: 3

Frontal Face

Normal Smile



# “Photo Essay”

SHOT #: 4

Frontal Face

Exaggerated Smile



# **Photographic Positioning**

## **Profile**

**Rotate the Pt 90 degrees.**

**Fill the frame with Neck to forehead.**

**Don't worry about the entire head.**

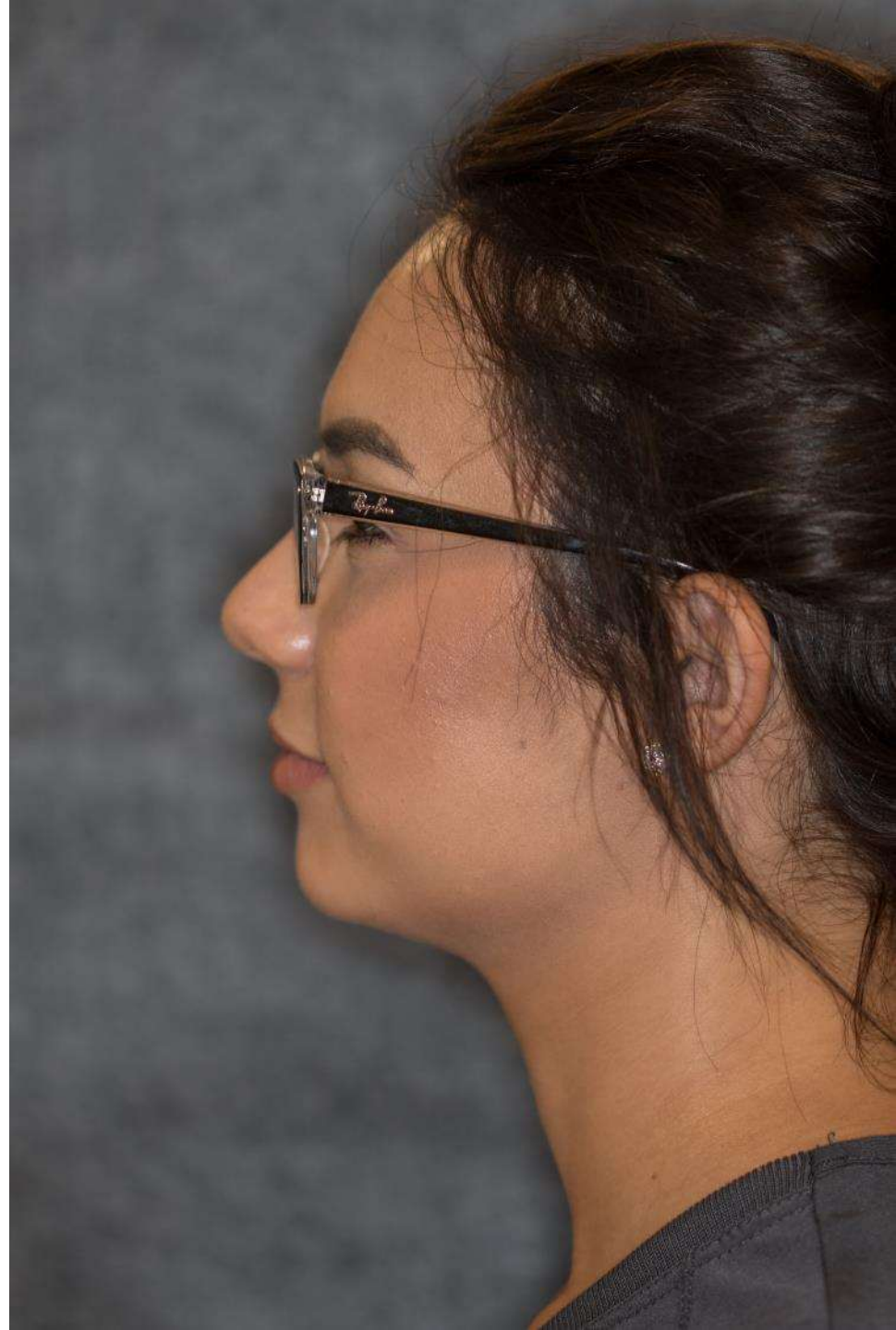
**Focus on the LIPS and reframe if needed.**

# “Photo Essay”

SHOT #: 5

Profile Face

C.O.

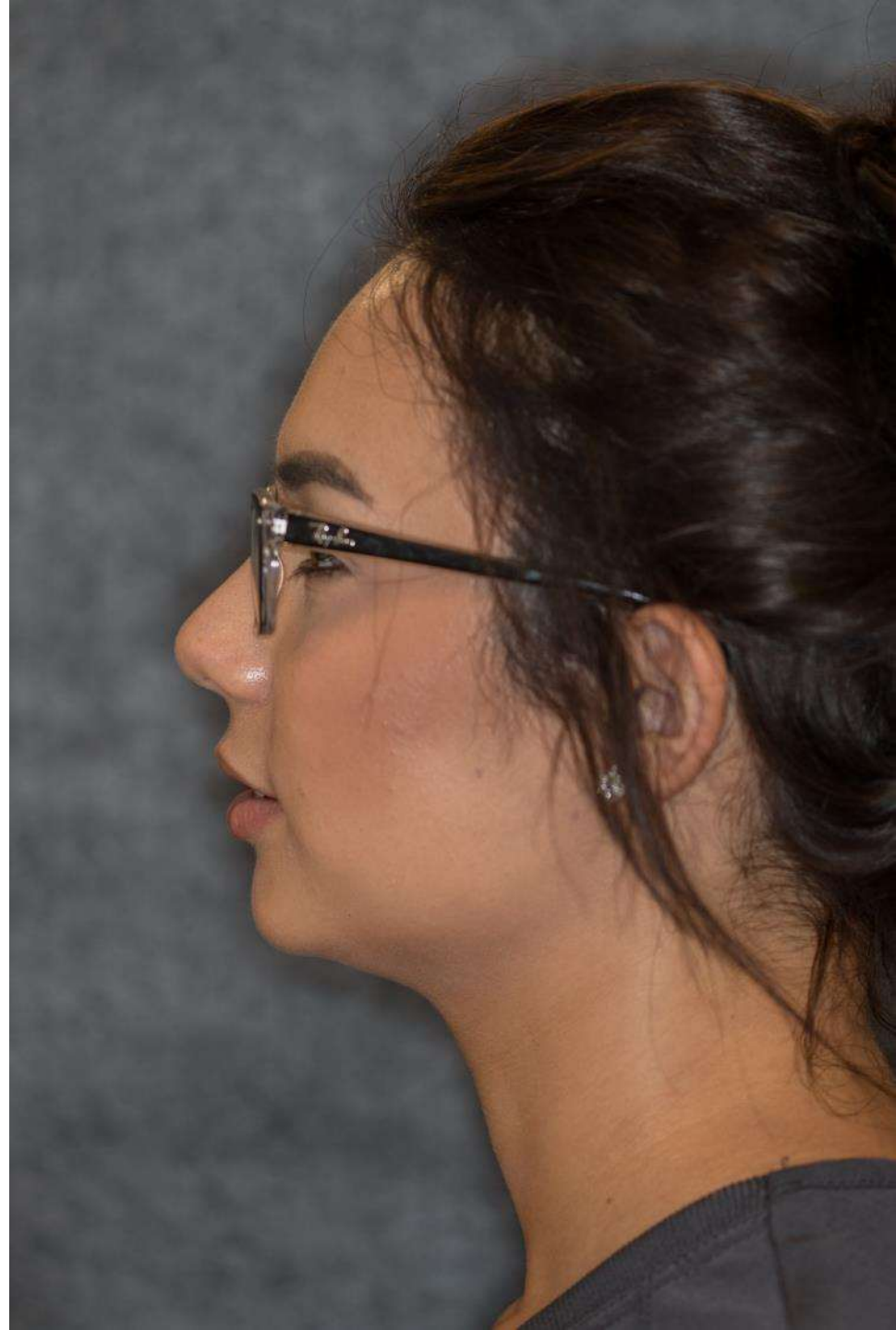


# “Photo Essay”

SHOT #: 6

Profile Face

Relaxed





# “Photo Essay”

SHOT #: 7

Profile Face

Normal Smile





# “Photo Essay”

SHOT #: 8

Profile Face

Exaggerated Smile



# Photographic Positioning

## CloseUps

Get mouth  
perpendicular to the  
front of the lens at a  
good focal distance to

And

**FILL THE FRAME.**



# What is a “Photo Essay”?



# Photographic Positioning

## CloseUps

Over head light aimed  
at mouth

Lip retractors straight  
out

And

**FILL THE FRAME.**





# Photographic Positioning



# “Photo Essay”

SHOT #: 13 - Teeth Front - CO





# “Photo Essay”

SHOT #: 14 – Teeth Front - Separated



# Photographic Positioning

## Upper Occlusal

This is a much better angle for the camera,

Good angle on the lip retraction,

Mirror against lower teeth

Good air spray from the DA to keep the mirror from fogging.



# “Photo Essay”

**SHOT #: 15 – Occlusal Mirror - Max**





# Photographic Positioning

## Lower Occlusal

Move around the Pt,

Move angle on the lip retraction,

Move mirror against upper teeth

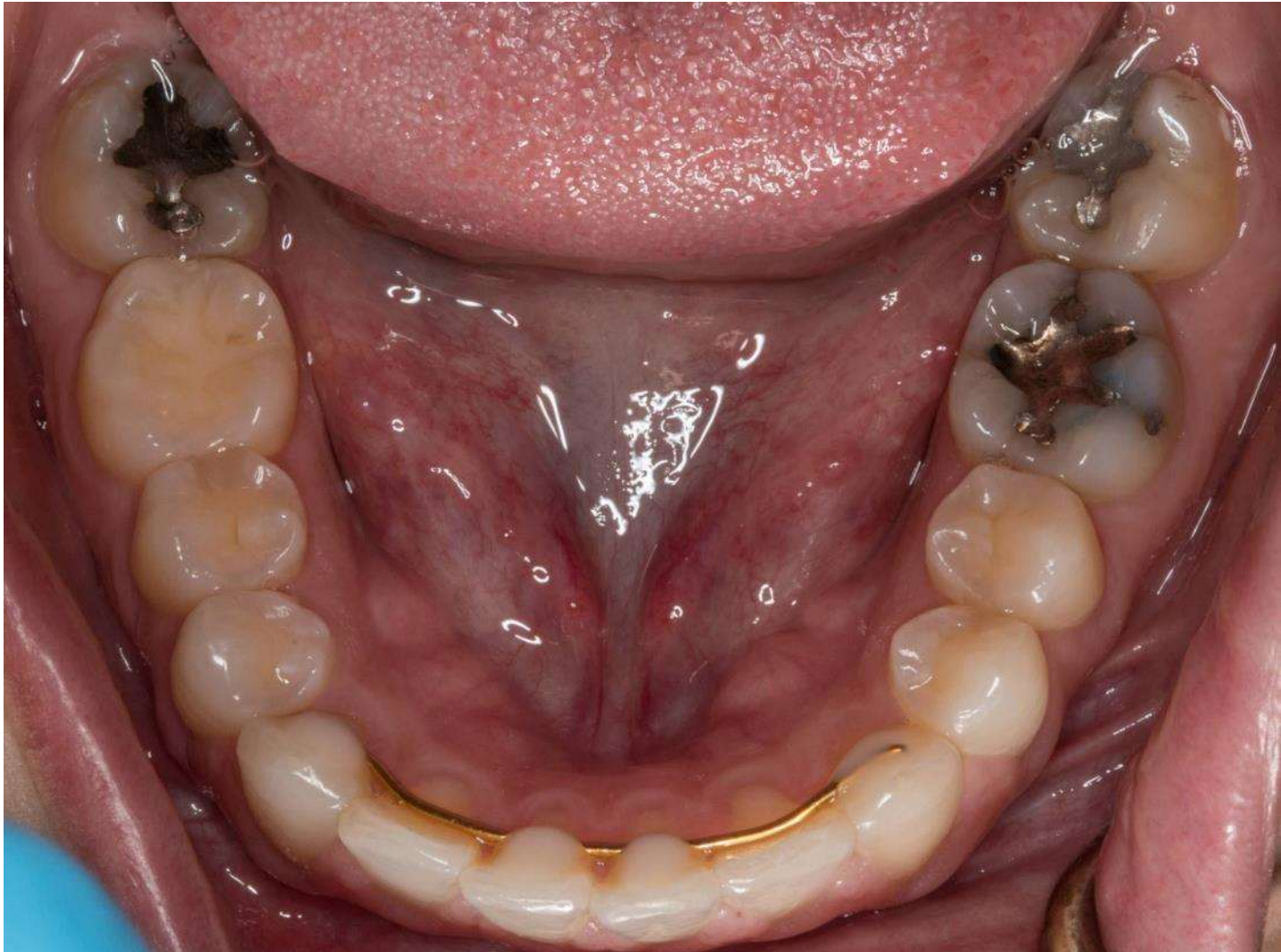
Turn Pt head at lens

Good air spray from the DA to keep the mirror from fogging.



# “Photo Essay”

**SHOT #: 16 – Occlusal Mirror - Mand**





# Photographic Positioning

## Right Lateral Mirror

Turn the Pt nose a bit  
**AWAY** from the lens

Opposing lip retractor

Mirror tail away from  
the back molars

Air spray on mirror



# “Photo Essay”



# “Photo Essay”

**SHOT #: 17 – Teeth Right – CO**



# “Photo Essay”

S



ng



# “Photo Essay”

**SHOT #: 19 – Teeth Right - Balancing**





# Photographic Positioning

## Left Lateral Mirror

Switch everything to the opposite side

Lens angle to see back molars without obstruction.



# “Photo Essay”

**SHOT #: 20 – Teeth Left - CO**



# “Photo Essay”

**SHOT #: 21 – Teeth Left - Working**



# “Photo Essay”

**SHOT #: 22 – Teeth Left - Balancing**





# What is a “Photo Essay”?





# Photographic Positioning

## – Inferior to Superior

- In cases where Ortho is being considered I like to shoot a shot that shows relative position of mandible, lips, maxilla, and zygomas all in one view.

# Photographic Positioning



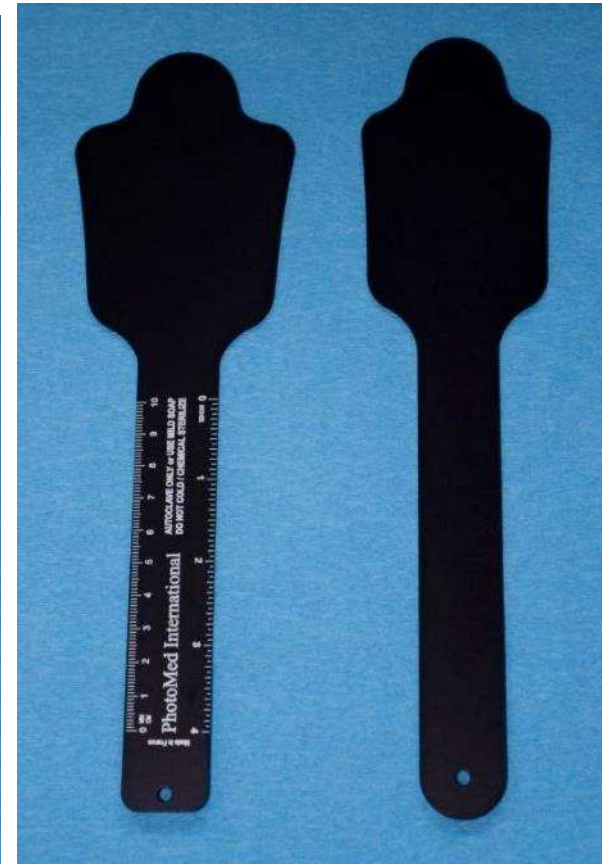
# “Photo Essay”

**SHOT #: 23 – Inferior-to-Superior**



# CASE COMPLETION

- Final photographs taken of big cases should be shot using oral contrastors for effect





# CASE COMPLETION

- Final photographs taken of another case using oral contrastors and cropped in post.





# CASE COMPLETION



# CASE COMPLETION



# CASE COMPLETION





# What is a “Photo Essay”?



# **Post Processing**

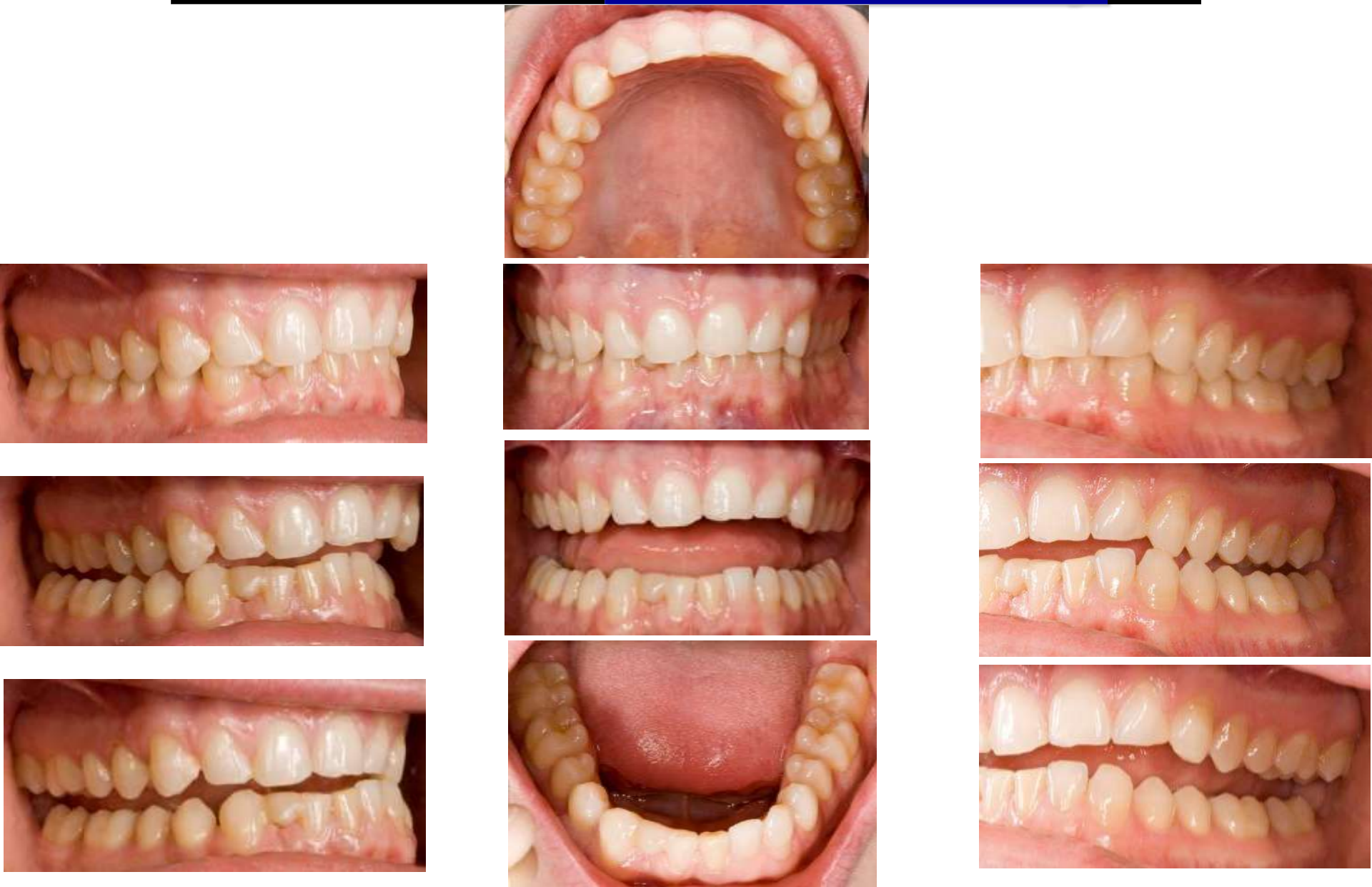
- **DENTAL STUDENT CASE**



# What is a “Photo Essay”?



# What is a “Photo Essay”?



# Comparison



Before



# Comparison



After

# Comparison



Before and After



# Delivery – Final



# Delivery – Final

**Before**



**After**



# Delivery – Final

**After - Incisal**



**After - Palatal**





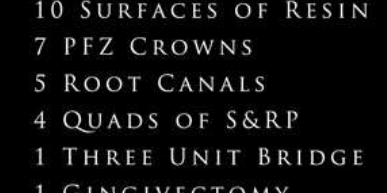
# FULL MOUTH RECONSTRUCION

BEFORE

AFTER



ONE YEAR LONG  
COMPLETE DENTAL  
TRANSFORMATION



10 SURFACES OF RESIN  
7 PFZ CROWNS  
5 ROOT CANALS  
4 QUADS OF S&RP  
1 THREE UNIT BRIDGE  
1 GINGIVECTOMY



# Smile Book Pages

This is how I take cases and abbreviate them into a single page and put them into a book I can use to show patients during treatment planning sessions.

**Full mouth Rehab Case**

# ANTERIOR VENEERS

BEFORE



MAXILLARY  
CANINE TO CANINE  
E-MAX VENEERS

TO REPAIR CHIPS  
AND  
CLOSE DIASTEMAS

AFTER



LAB FABRICATED WAX-UP  
OF ANTICIPATED "IDEAL"  
TARGET OUTCOME



MODEL OF WAX-UP  
USED TO MAKE  
REDUCION STENT



AND PUTTY MATRIX  
FOR FABRICATING  
TEMPORARY  
RESTORATIONS



# Smile Book Pages

This is how I take cases and abbreviate them into a single page and put them into a book I can use to show patients during treatment planning sessions.

**Upper Veneers Case**



# MAXILARY RECONSTRUCION

BEFORE

AFTER



THREE MONTH  
UPPER ARCH  
RESTORATION



3 ROOT CANALS  
4 PFZ CROWNS  
2 THREE UNIT BRIDGES



# Smile Book Pages

This is how I take cases and abbreviate them into a single page and put them into a book I can use to show patients during treatment planning sessions.

Upper Arch Rehab Case

# ANTERIOR CROWNS

BEFORE



MAXILLARY  
FOUR INCISOR  
FULL COVERAGE  
PFZ CROWNS

WITH

PREMEDITATED RCT  
TO MOVE #9 PALATALLY  
BY PREPPING

AFTER



# Smile Book Pages

This is how I take cases and abbreviate them into a single page and put them into a book I can use to show patients during treatment planning sessions.

Upper Crowns Case

# REMOVABLE PARTIAL DENTURE

# Smile Book Pages

BEFORE

AFTER



ROTATIONAL  
INSERTION  
MAXILLARY  
REMOVABLE  
PARTIAL  
DENTURE

REPLACING  
4,5,8, & 9



This is how I take cases and abbreviate them into a single page and put them into a book I can use to show patients during treatment planning sessions.

**RPD Case**



# COMBINATION DENTURE CASE

BEFORE

AFTER



MAXILLARY  
COMPLETE DENTURE

OVER A

MANDIBULAR  
REMOVABLE  
PARTIAL DENTURE



13 EXTRACTED TEETH  
DONE IN TWO STAGES  
WITH ALVEOLOPLASTY



AND

12 SURFACES OF RESIN



# Smile Book Pages

This is how I take cases and abbreviate them into a single page and put them into a book I can use to show patients during treatment planning sessions.

Denture Case

# IMPLANT PLACEMENT SURGERY

BEFORE

AFTER



SINGLE  
MANDIBULAR  
MOLAR #30  
IMPLANT  
SURGERY  
(1 OF 2)



# Smile Book Pages

This is how I take cases and abbreviate them into a single page and put them into a book I can use to show patients during treatment planning sessions.

**Implant Placement**



# IMPLANT PLACEMENT SURGERY

BEFORE

AFTER



SINGLE  
MANDIBULAR  
MOLAR #30  
IMPLANT  
SURGERY  
(2 OF 2)



# Smile Book Pages

This is how I take cases and abbreviate them into a single page and put them into a book I can use to show patients during treatment planning sessions.

**Implant Placement**

## This patient presented for emergency



SHE IS HAVING PAIN AND DISCOMFORT IN SEVERAL AREAS,  
BUT CC THAT DAY WAS LLQ ALL THE WAY BACK

# results

**THE PATIENT WAS VERY HAPPY WITH THE RESULTS  
after a long and extensive TxP was completed.**

**SHE WAS VERY GRATEFUL AND APPRECIATIVE**

**FINAL POST OP PHOTOS WERE TAKEN FOR  
BEFORE AND AFTER COMPARISONS**

# Before and after





# Before and after





# Before and after



# Before and after





# Before and after



after



after





after



after



# Thank You for Attending

**INDOC**



**Inland Northwest  
Dental Conference**

April 11-12, 2024 - Spokane, WA



# Contact Coordinates

- Any Questions? Dr. Michael Yurth, D.D.S.
- Send me an EMAIL: [myurth@yurthworks.com](mailto:myurth@yurthworks.com)
- [michaely@yvfwc.org](mailto:michaely@yvfwc.org)



*Dr Michael Yurth D.D.S.*  
*Dentist, Photographer, Teacher, Artisan*  
*myurth@yurthworks.com*  
*http://lnkd.in/em-mbs*  
*Cell #: (734) 646-7682*

501 Byron Road,  
Prosser, WA  
99350

[www.yurthworks.com](http://www.yurthworks.com)

The business card features a central logo for "Yurth Works". The letter "Y" is a large, dark wood-textured shape with a globe of the Earth balanced on top. The letter "W" is a large, dark grey, metallic-looking shape. The letter "O" is a camera lens. The letters "rth" are in a wood texture, and "orks" are in a metallic silver/grey. A white dental crown is positioned between the "Y" and "rth".

# Northwest Dental Residency

Advanced  
Education  
in  
General  
Dentistry

## CONTACT US:

The Residency Director is willing to help as well.

I am in CLINIC MON and TUE

And on ADMIN time on WED and THUR

**Michael Yurth D.D.S.**

Dental Residency Program DIRECTOR

Northwest Dental Residency

1720 Presson Place

Yakima, WA 98903

509-865-6175 (Office) Ext: 3679

[michaely@yvfwc.org](mailto:michaely@yvfwc.org)





A wide-angle photograph of a sunset over a desert landscape. The sky is filled with dramatic, dark clouds illuminated from below by the setting sun, creating a palette of deep reds, oranges, and purples. The sun is visible as a bright orange glow on the horizon to the right. The foreground shows a dark, silhouetted desert plain with some low-lying vegetation. The text 'THE END' is centered in the middle of the image in a large, bold, dark grey font, with a thin horizontal line underneath it.

THE END

# Good Luck!!!

- I hope this helps everyone!
- May the beautiful images be with you!

• THE END