



Introduction to Digital Photography

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Introduction to Digital Photography

Camera Features/Controls

Other Equipment

Shooting tips

Composition

Types of Photography

Exposure

Light

Color

Editing

Why take pictures?

Why take pictures?

- Fun
- Artistically and intellectually satisfying
- Memories/keepsakes
- Documentation, journalism, history
- Marketing/sales
- Art

Types of Photography

- Snapshots
- Landscape
- Nature
- Portrait
- Art
- Photojournalism
- Action/Sports
- Abstract
- Architecture/Real Estate
- Macro
- Street

What is a photography?

Webster's:

*the art or process of producing images
by the action of radiant energy and especially light
on a sensitive surface (as film or a CCD chip)*

PHOTO GRAPH

Light Writing

Pixel Power



1 pixel = 1 square of solid color

Pixels and Megapixels



1 pixel = 1 square of solid color

Pixels and Megapixels



Megapixel = 1,000 pixels

Pixels and Megapixels



Thousands of pixels of various shades . . .

Pixels and Megapixels



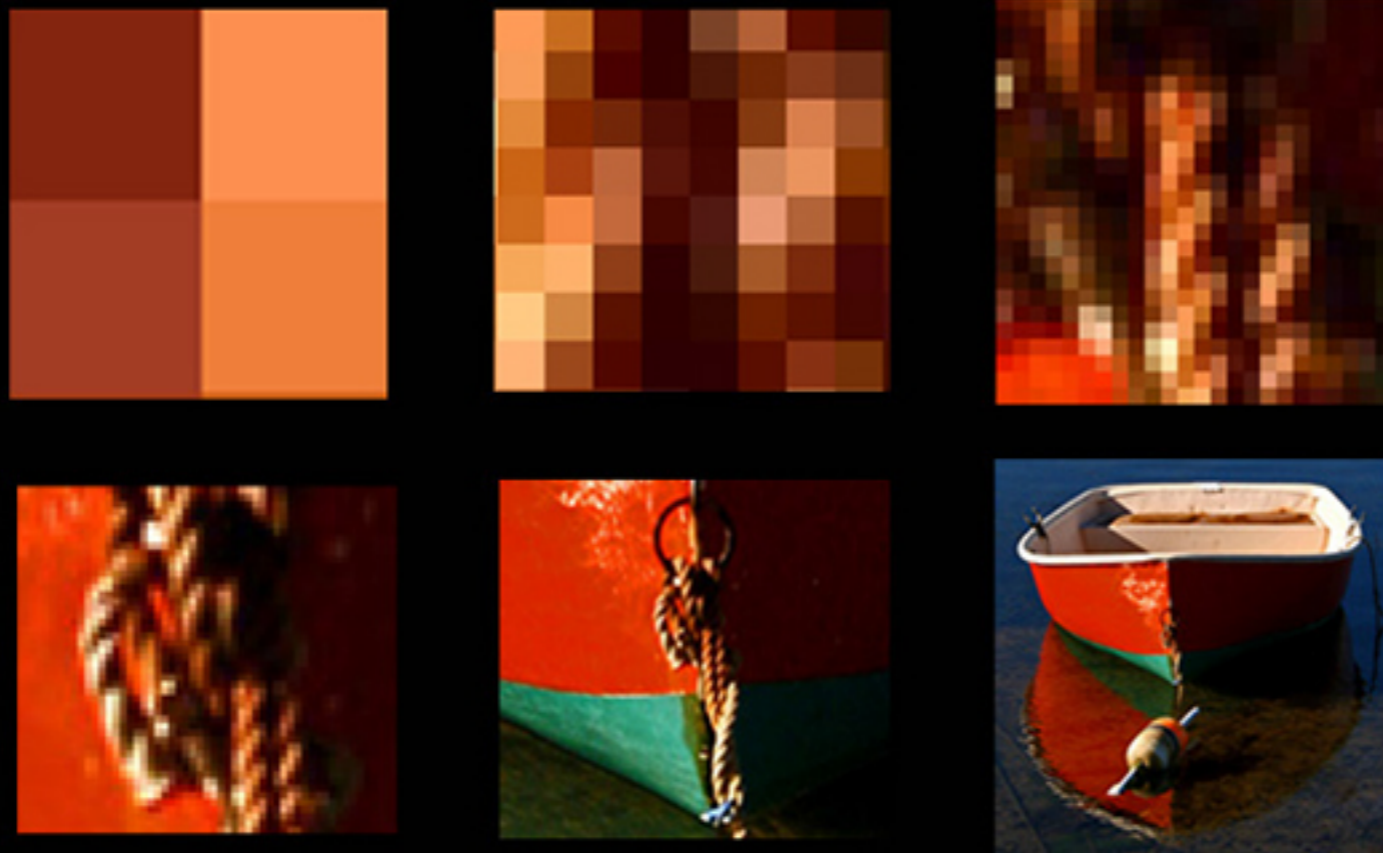
make up . . .

Pixels and Megapixels



. . . every picture

Pixels and Megapixels



More pixels = more data = higher quality image

7-15 megapixels good for most situations

*Lens and sensor also affect image quality

File Formats & Image Quality

JPEG
RAW

JPEG

Compressed file format
Smaller file, lower quality
But lower quality
All software reads JPEGs
Use highest quality setting - L, Fine, Super Fine

RAW

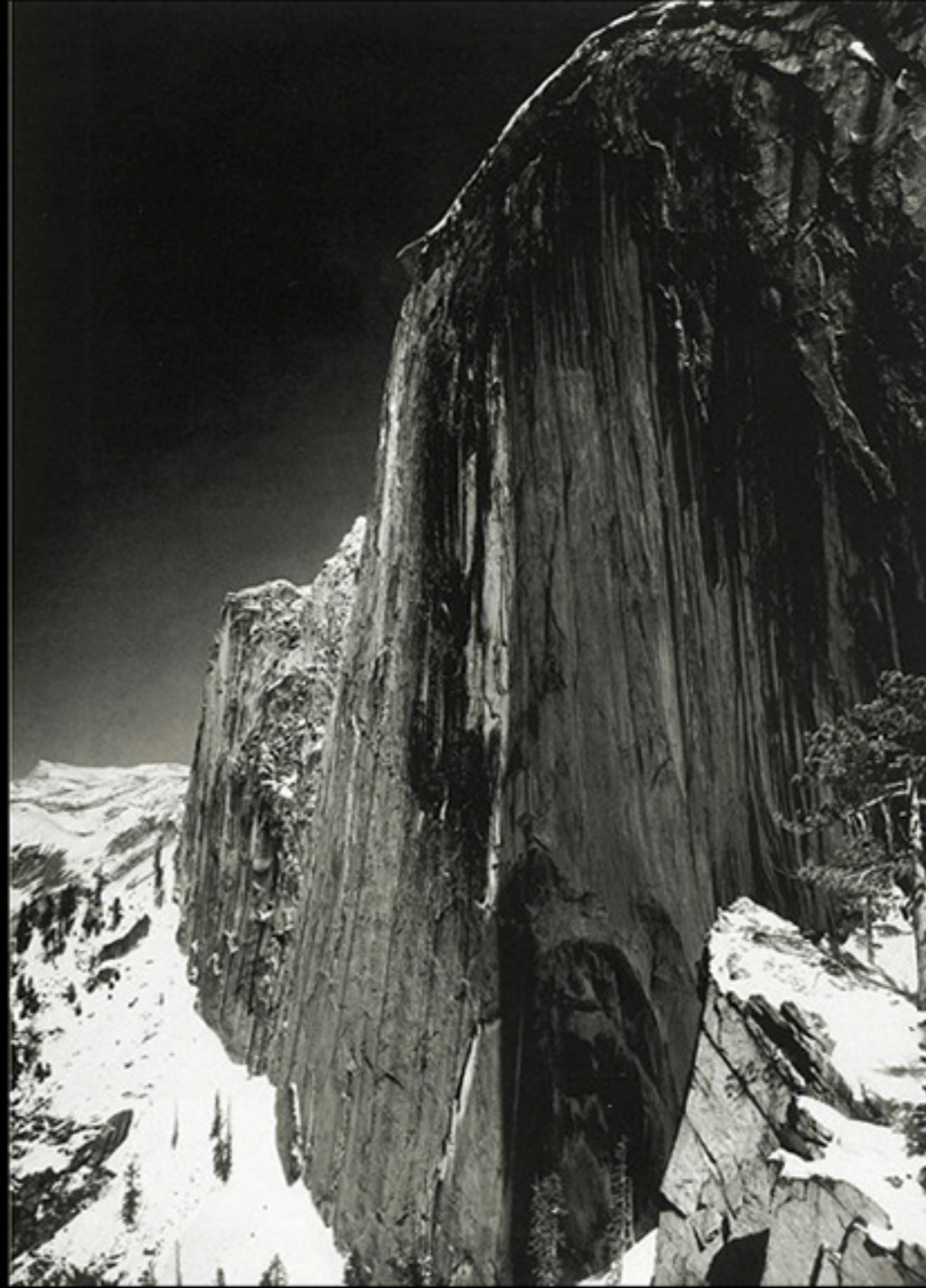
High quality, large file
Uncompressed data. Captures all data.
Larger color gamut
More flexibility in processing image
Requires RAW software (comes w/Photoshop & Elements)
RAW may not be option on compact cameras



You don't take a photograph...you make it.

- Ansel Adams

Making a Picture



1927

Monolith, The Face of Half Dome

Ansel Adams

Making a Picture



1927



1980

Monolith, The Face of Half Dome
Ansel Adams

Making a Picture



Winter Sunrise

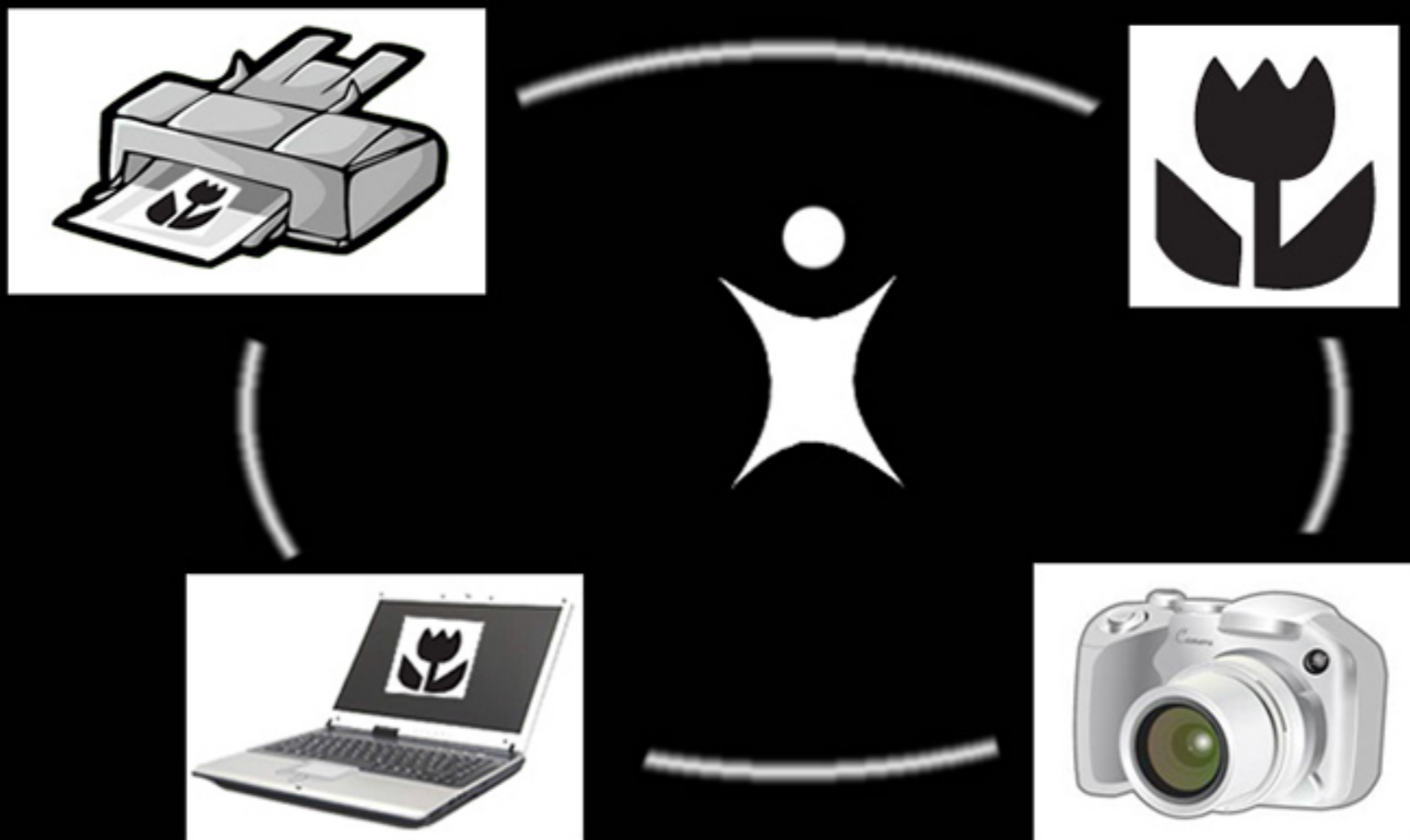
Ansel Adams

Making a Picture



Winter Sunrise

Ansel Adams



The Digital Photography System.

Camera Modes



Auto -- Automatic control of exposure and flash



Program -- Mostly auto. Lets you control ISO, flash and white balance



Landscape -- Uses high f-stop to try and keep foreground and background sharp



Portrait -- Tries to blur out background by using low f-stop



Sports/Action -- Uses fastest shutter speed to try and stop action



Macro -- Close-up shooting, shallow depth of field



Aperture Priority -- You adjust f-stops, camera adjusts shutter speed to match



Time/Shutter Priority -- You control shutter speed. Camera automatically adjust aperture to maintain proper exposure

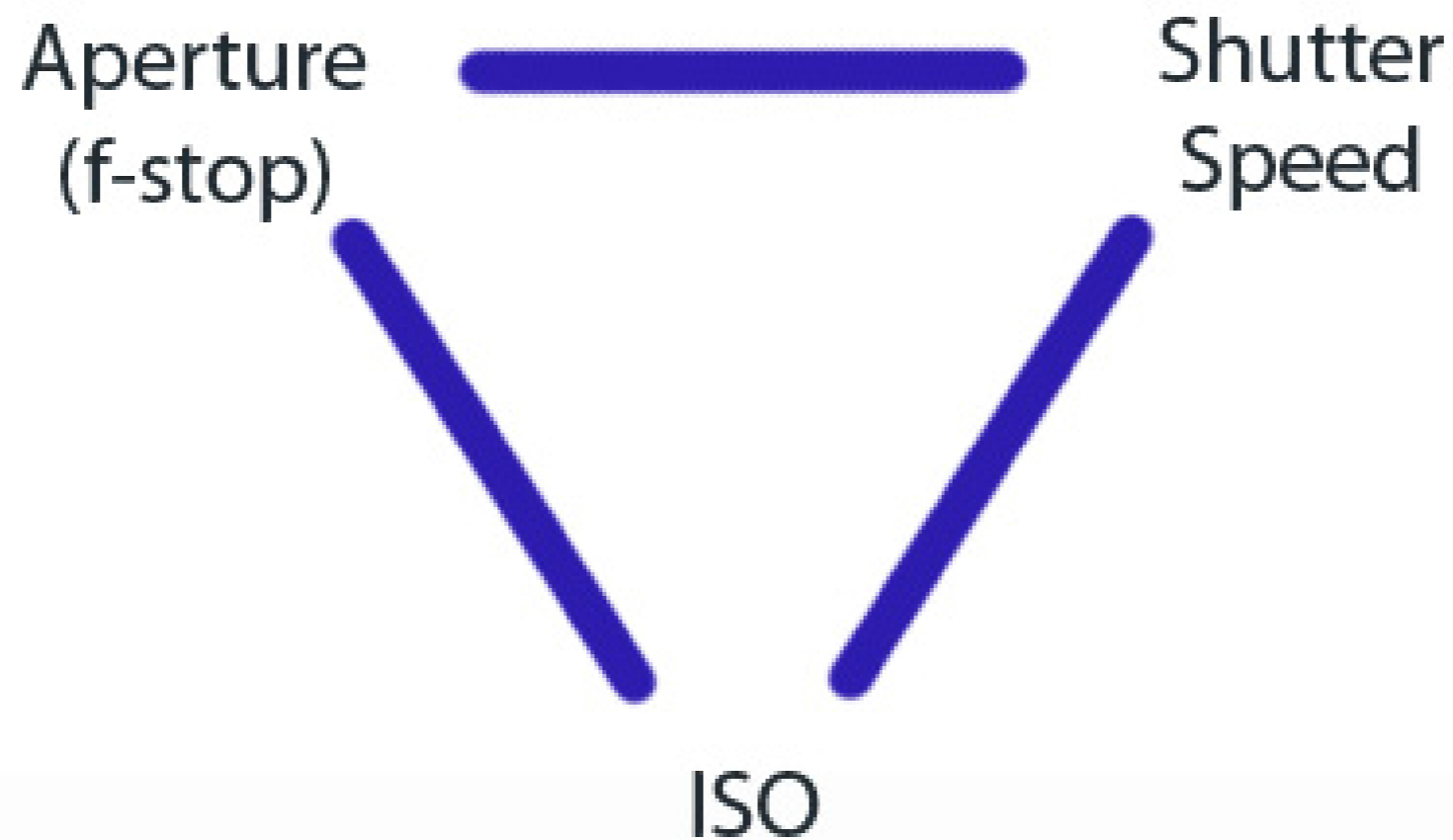


Manual -- You have full control

Three Keys to a Good Picture

- Proper Exposure
- Focus/Sharpness
- Composition

3 Elements of Expoure



Aperture



Small diameter
High f-stop ($f11+$)



Large diameter
Low f-stop ($<f5.6$)

Aperture

1.4

Less depth of field

f2, f2.8

f4

f5.6

f8

f11

f16

f22

Greater depth of field



Depth of Field

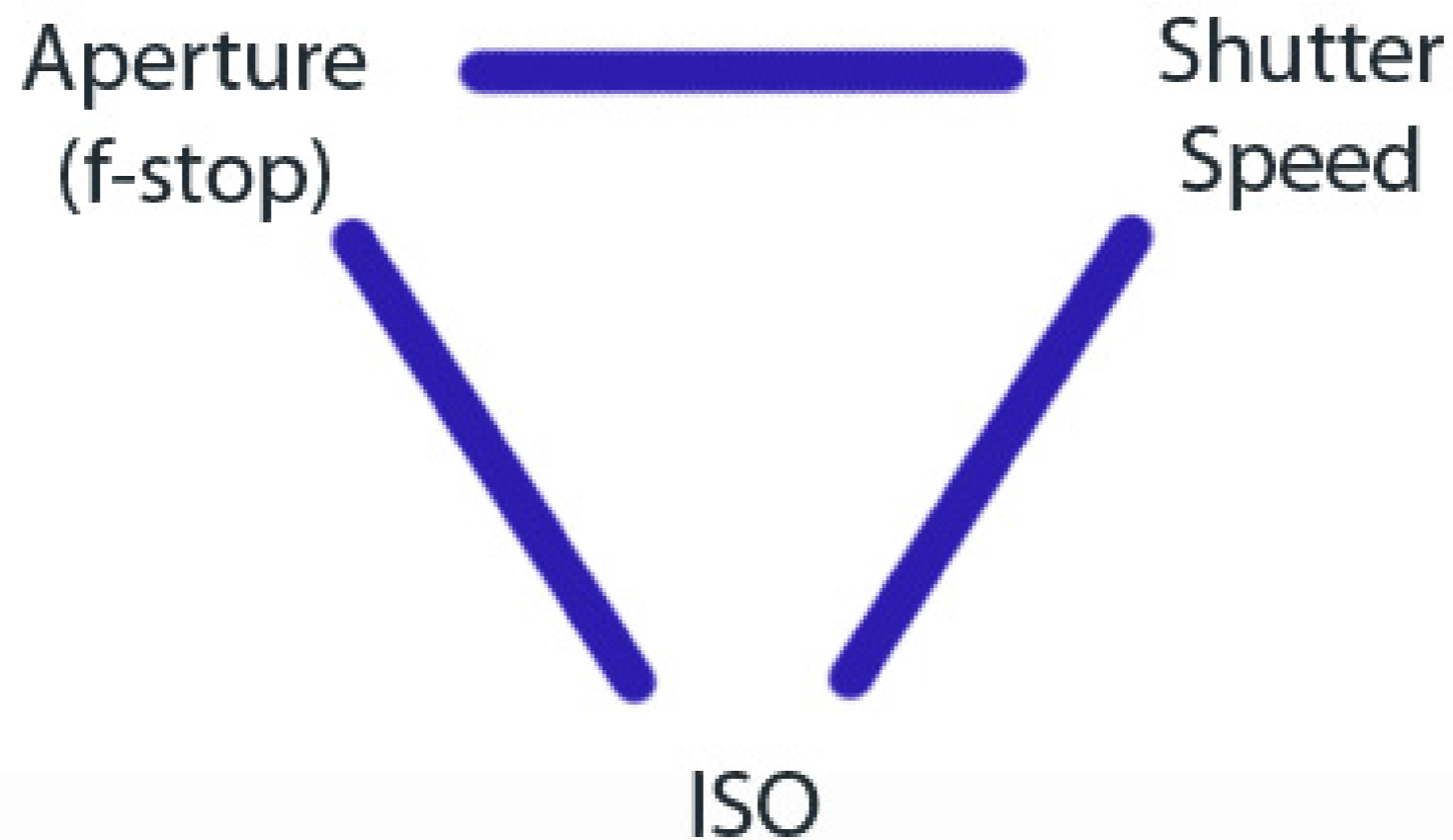


Long Depth of Field /
High f-stop (f11+)

Shallow Depth of Field /
Low f-stop (<f5.6)



3 Elements of Expoure



Shutter Speed

1/8

Tripod

1/15

1/30

Hand Held

1/60

1/125

1/250

Stop Action

1/500

1/1000

Shutter Speed

Aperture

1/8

1.4

1/15

f2, f2.8

1/30

f4

1/60

f5.6

1/125

f8

1/250

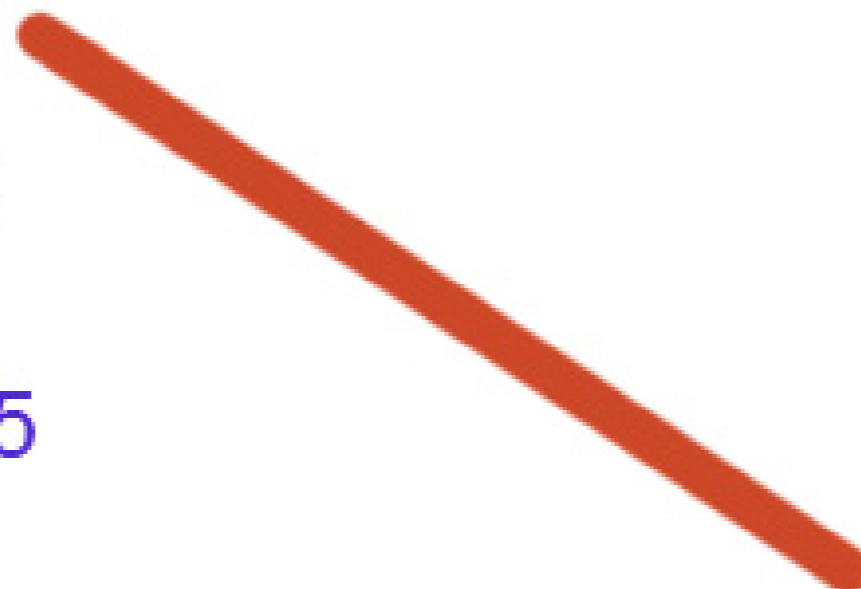
f11

1/500

f16

1/1000

f22



Shutter Speed

Aperture

1/8

1.4

1/15

f2, f2.8

1/30

f4

1/60

f5.6

1/125

f8

1/250

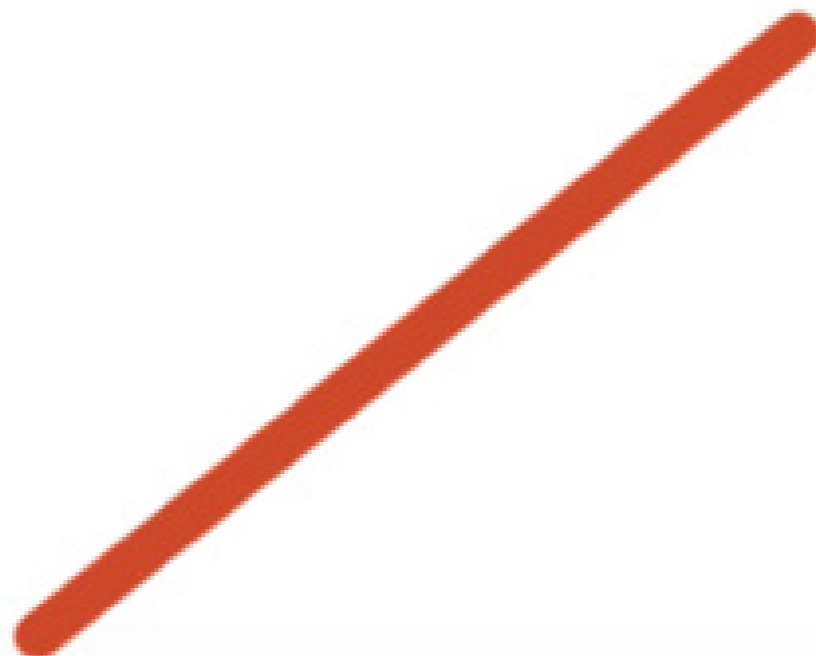
f11

1/500

f16

1/1000

f22



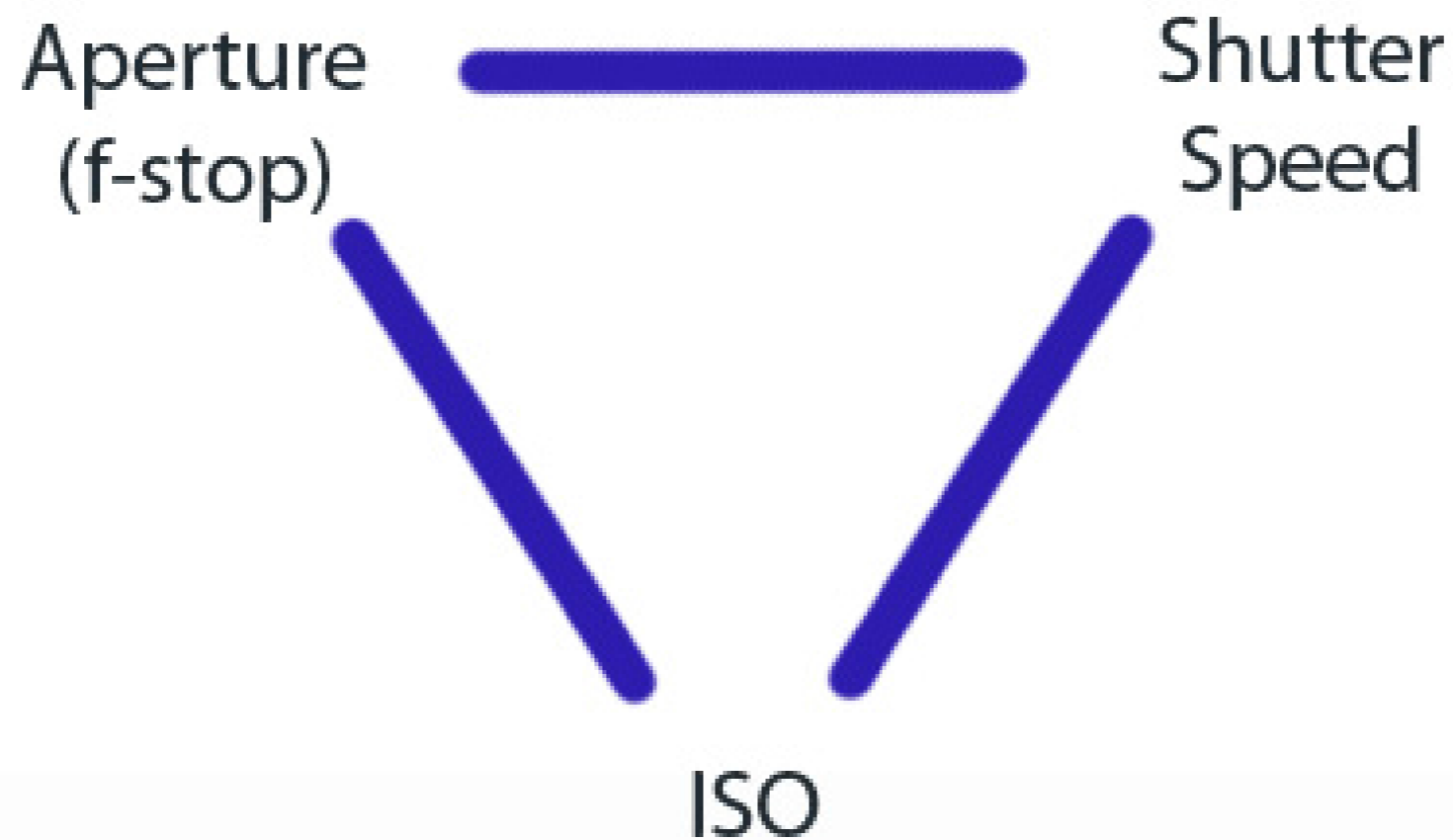


STOP ACTION

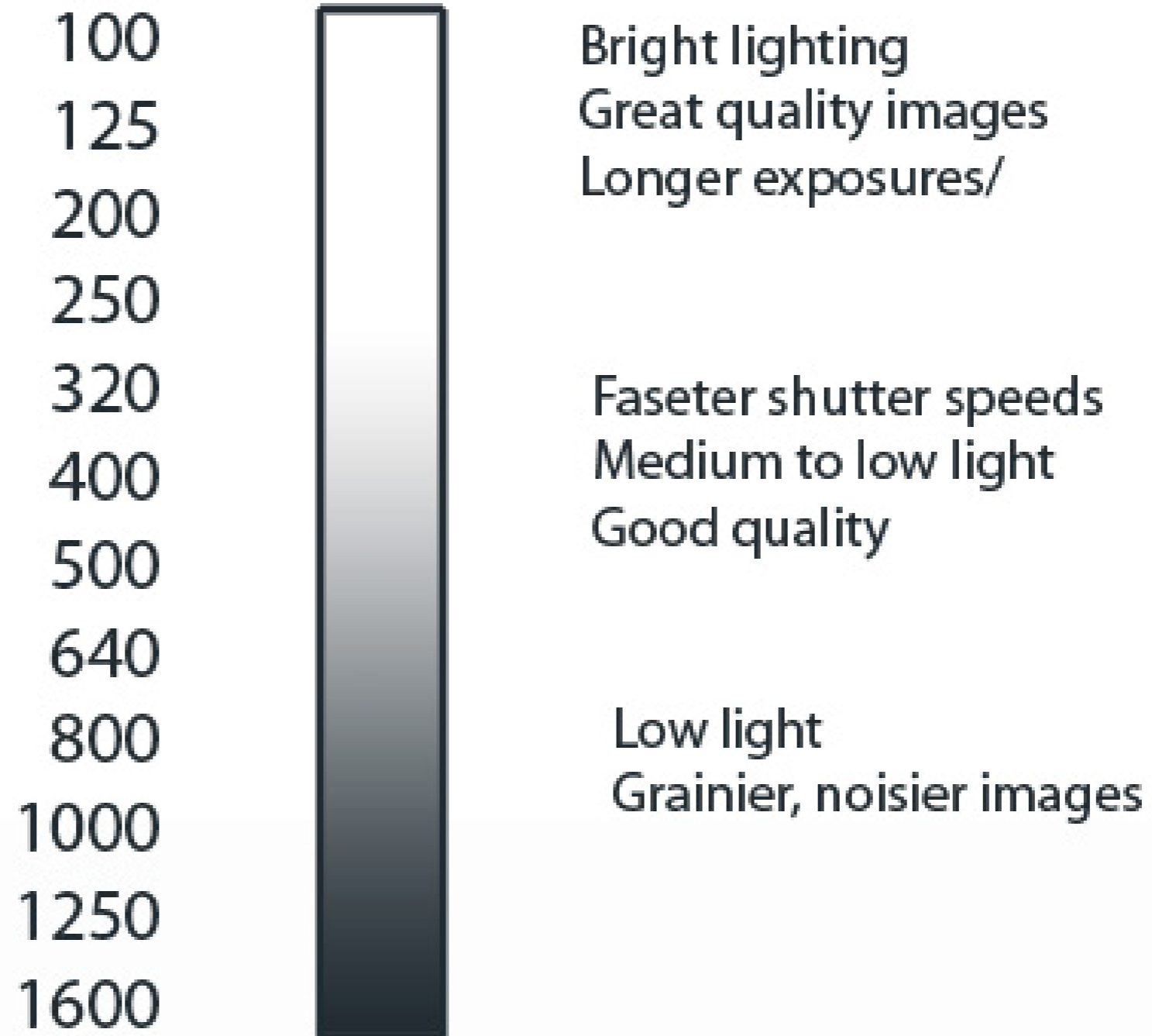


BLURRED ACTION

3 Elements of Expoure



ISO



ISO 200





ISO 200



ISO 1600

Higher ISO increases sensitivity of sensor.
Use higher ISO in low light conditions.
Higher ISO increases “noise” or “graininess”
Noise levels vary among cameras

Camera Modes



Auto -- Automatic control of exposure and flash



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Aperture Priority -- You adjust f-stops, camera adjusts shutter speed to match



Time/Shutter Priority -- You control shutter speed. Camera automatically adjust aperture to maintain proper exposure



Manual -- You have full control

Aperture Priority Mode

You control aperture (f-stop) setting

Camera automatically adjust shutter speed to match aperture

Advantages of Aperture Priority Mode

You control exposure, depth of field
and shutter speed

Three Keys to a Good Picture

- Proper Exposure
- **Focus**
- Composition

Focus/Sharpness

How AF works

- Active: Infrared beam
- Passive: Looks for contrast

- Shutter Lag
- Press Halfway, then shoot
- Focus Lock
- Focus Points

- Depth of Field / Aperture

- Hold camera steady
- Tripod
- Cable Release

- Image Stabilization
(turn off with tripod or when moving)

Three Keys to a Good Picture

- Proper Exposure
- Focus/Sharpness
- **Composition**

Photography
and
the Art of Seeing

13 Seeing/Composition Tips

1. Keep it simple
2. Don't aim for the bull's eye (Rule of Thirds)
3. Go for Odd over Even (Rule of Three)
4. Find the Lines (leading, curved, etc.)
5. Look at the Light
6. Contrast and Compare
7. Keep it Balanced
8. Add Texture/Pattern
9. Frame it
10. Look for reflections
11. What's the Story?
12. Play with Time & Space (shutter speed & depth of field)
13. Work the scene

5 Seeing/Composition Tips

1. Keep it simple
2. Don't aim for the bull's eye (Rule of Thirds)
- 3.. Find the Lines (leading, curved, etc.)
4. Look at the Light (direction, color, texture)
- 5.. Frame it (Use elements in scene, check edges of viewfinder)

Bonus tip #1: Work the scene

Bonus tip#2: Play with Time & Space (shutter speed & depth of field)





Composition

Principles

Harmony/Unity

Variety

Balance

Emphasis

Rule of thirds/

Golden Mean

Content

Lines

Shape

Color

Texture

Pattern

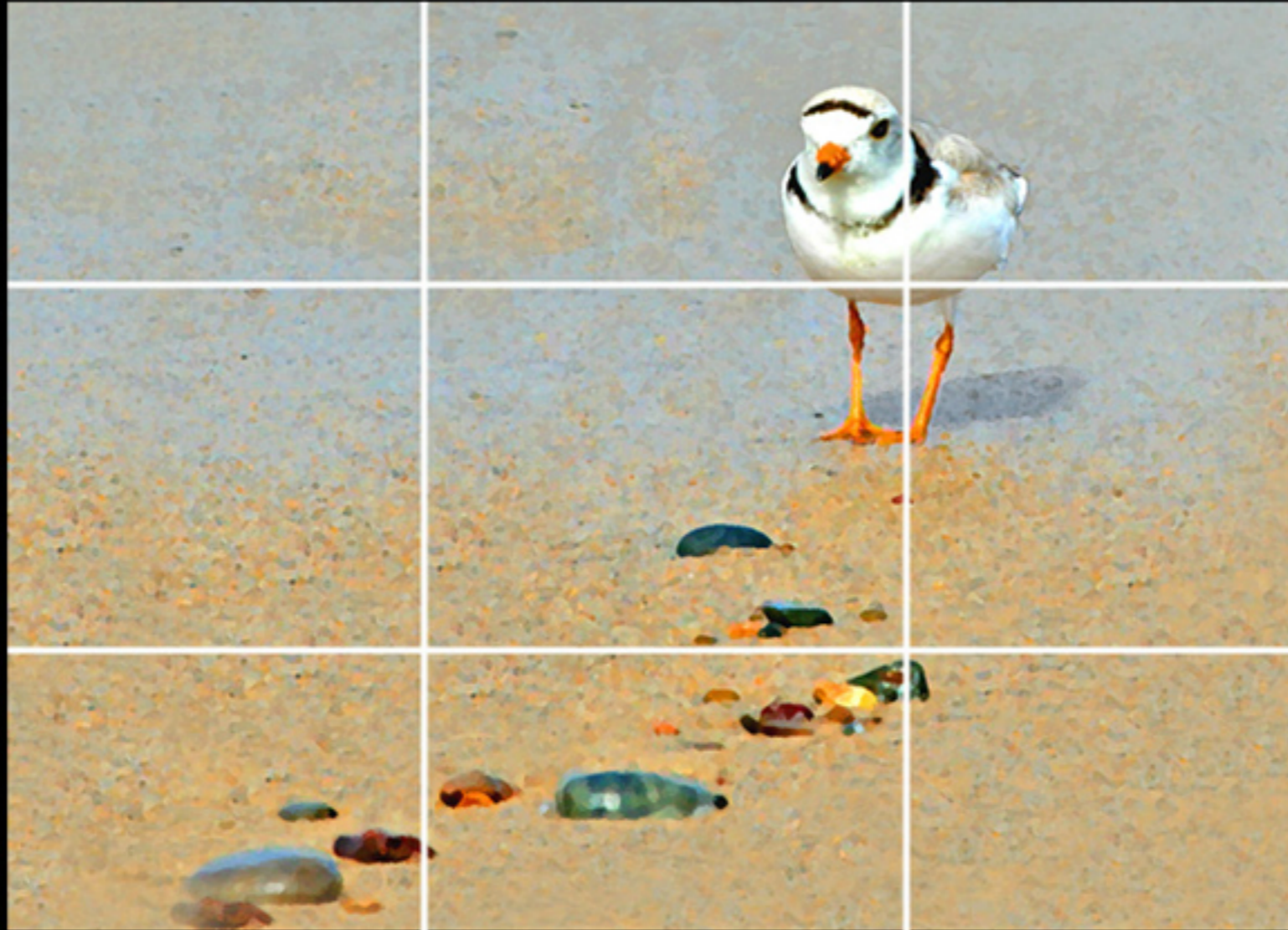
11 Elements of Composition

1. Rule of Thirds
2. Rule of Three
3. Lines (leading, curved, etc.)
4. Exposure Control
 - Depth of Field/Selective Focus
 - Shutter Speed (stop action, blur)
5. Balance
6. Texture/Pattern
7. Contrast - Light, Color, Subjects
8. Framing
9. Reflection
10. Point of View – High, Low
11. Narrative: What's the Story?

Rule of Thirds



Rule of Thirds



Rule of Thirds



Rule of Thirds



Rule of Thirds



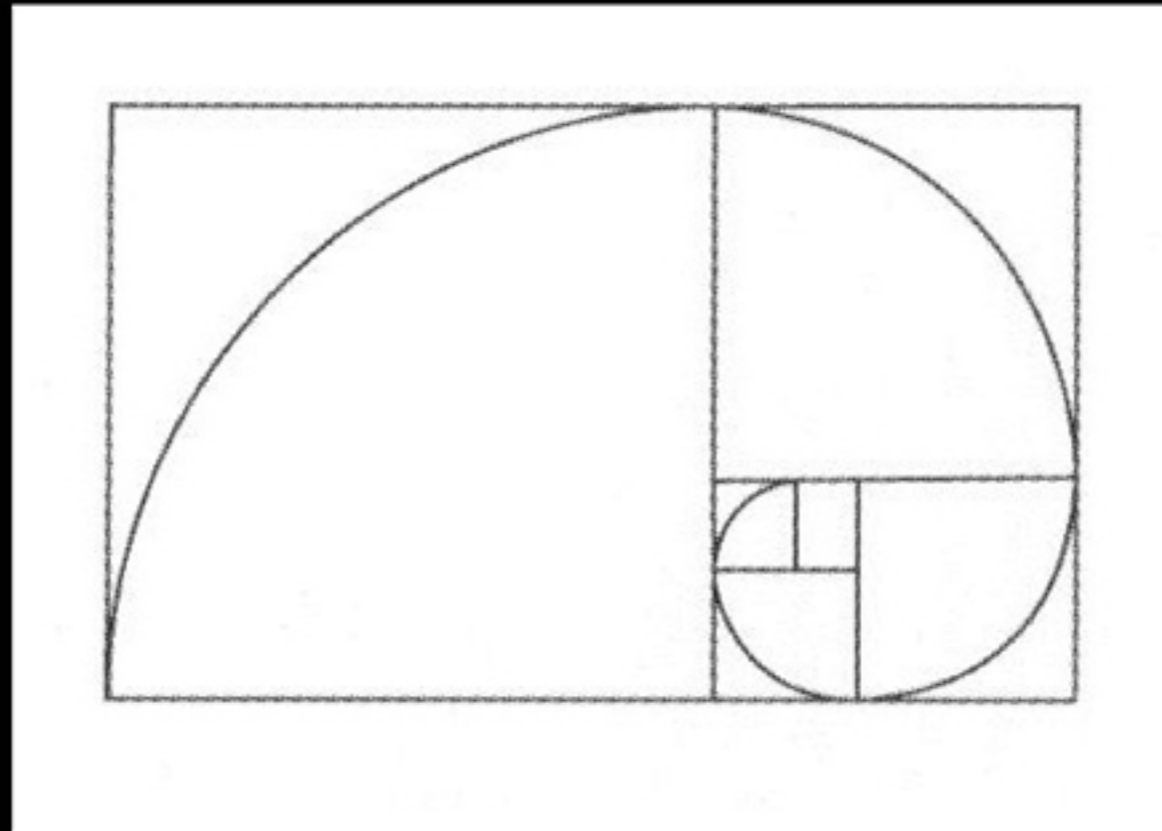
Rule of Thirds



Rule of Thirds



Rule of Thirds



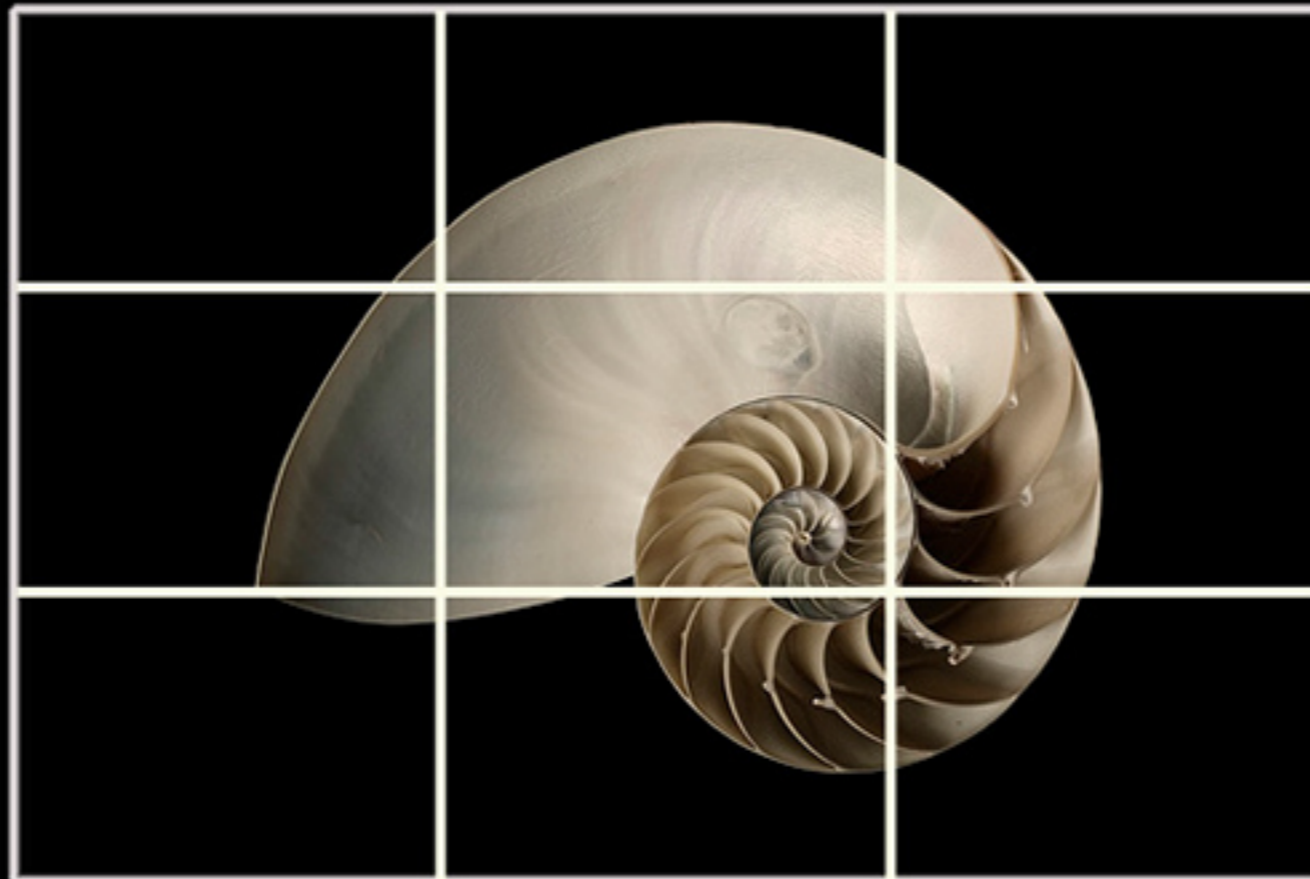
Fibonacci sequence 0, 1, 1, 2, 3, 5, 8, 13, 21, 34...

Golden mean/ratio 1.618

Flower petals, finger bones, etc



Balance and the Rule of Thirds



Balance and the Rule of Thirds











Rule of Thirds



Alfred Eisenstadt - VJ-Day

Rule of Thirds

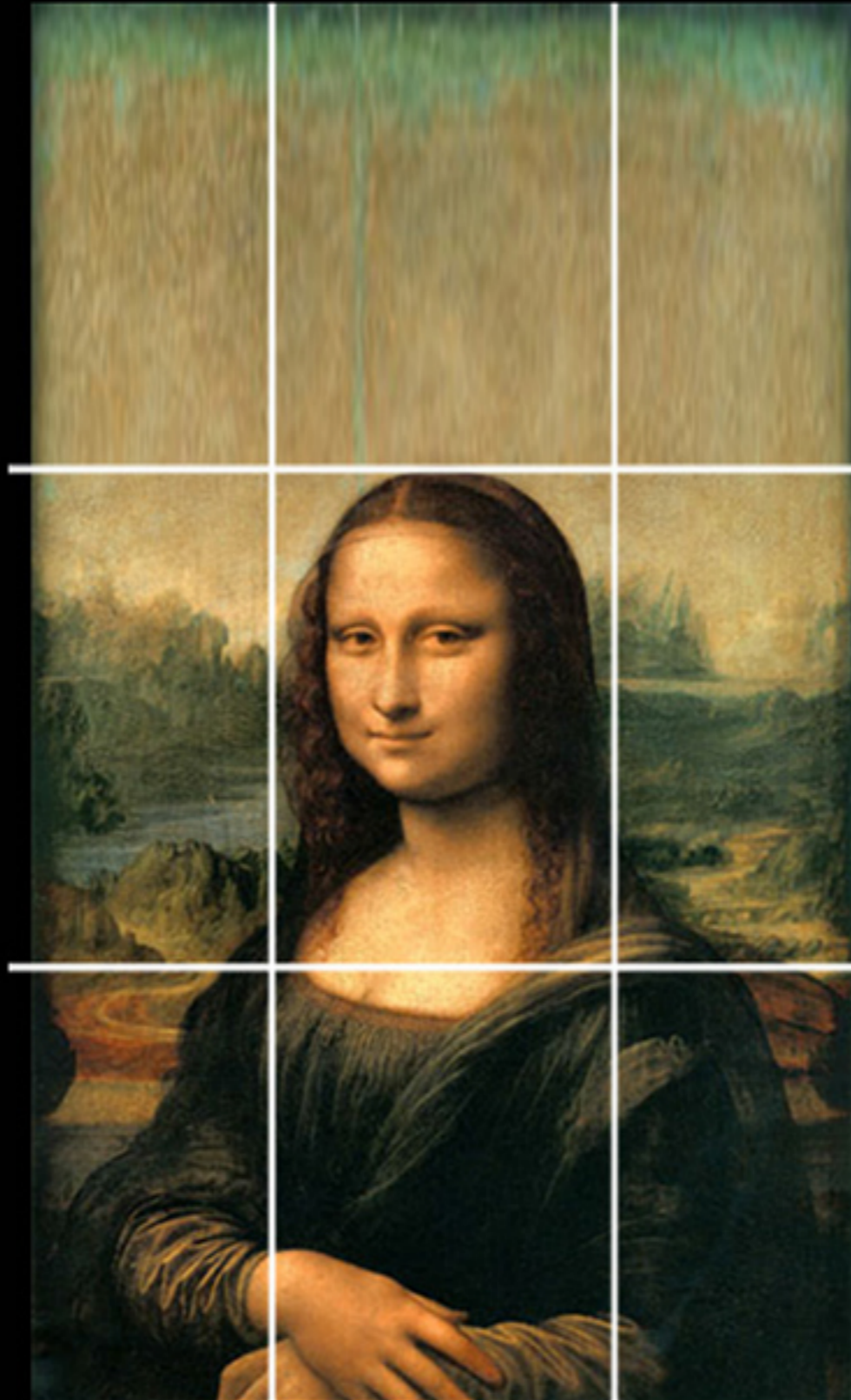


Alfred Eisenstadt - VJ-Day

Rule of Thirds



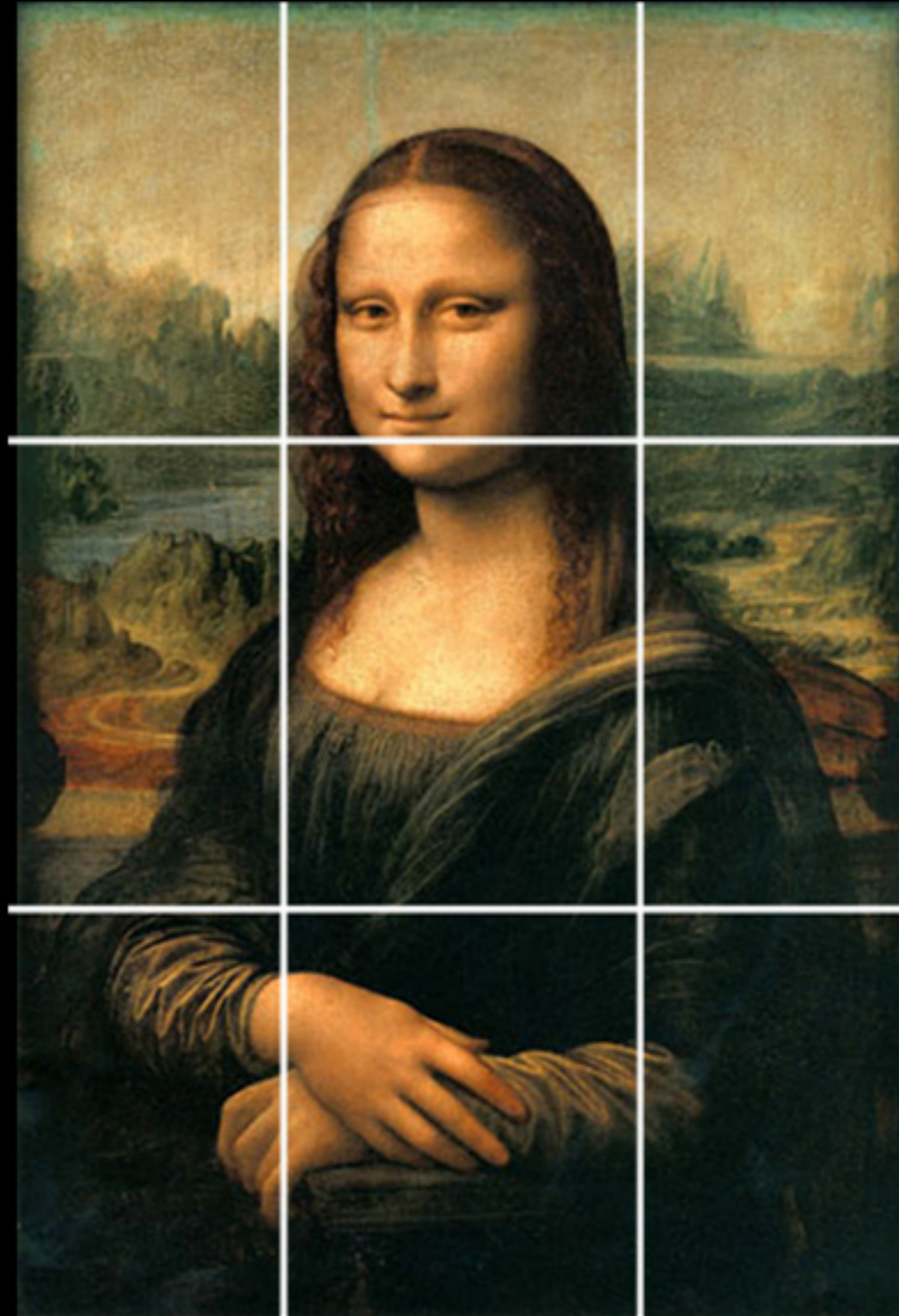
Rule of Thirds



Rule of Thirds



Rule of Thirds



Working the Scene / Learning to See



Work the Scene



Try a different angle . . .

Work the Scene



Fill the screen with your subject . . .

Work the Scene



Change your point of view --
Shoot from above, below, the side, etc.

Work the Scene



Remember rule of thirds, keep subject off center.
Check the background and foreground .

Work the Scene



Shoot vertical . . .

Work the Scene



. . . or horizontal. Get in close. Isolate elements.

Work the Scene



Experiment and play

Work the Scene



Work the Scene



Work the Scene



Work the Scene



Work the Scene



Work the Scene



Keep it Simple



Let the viewers know what they're supposed to look at

Keep it Simple



Keep it Simple



Keep it Simple



It's okay to have more than one element,
but the subject must be obvious

Keep it Simple



It's okay to have more than one element,
but the subject must be obvious

5 Questions to Ask Before You Shoot

1. Is the subject/center of interest distinct?

Tips: Simplify. Position your subject or yourself so that the subject stands out. Get closer.

2. Where is the subject in the composition?

Tip: Use the rule of thirds as a guide. Try for balance.

3. What is the best point of view?

Tips: Work the scene. Shoot up, down, straight ahead, profile, three-quarters. Try horizontal and vertical.

4. What's in the background/foreground?

Tip: Re-position yourself or your subject to minimize distracting clutter.

5. What's along the edges of the viewfinder?

Tip: Same as above. Also, use other elements to frame your subject.

- The Digital Photography System
- Making vs. Taking Pictures
- Megapixels
- Camera Controls
 - *File Formats/Image Quality Setting (use JPEG, highest)*
 - *Camera Modes (Use aperture priority)*
 - *Focus Points & Focus Lock*
- 3 Keys to Good Picture
(Exposure, Focus/Sharpness, Composition)
- Elements of Composition/Rule of Thirds
- Working the Scene Learning to See
- Keep it Simple