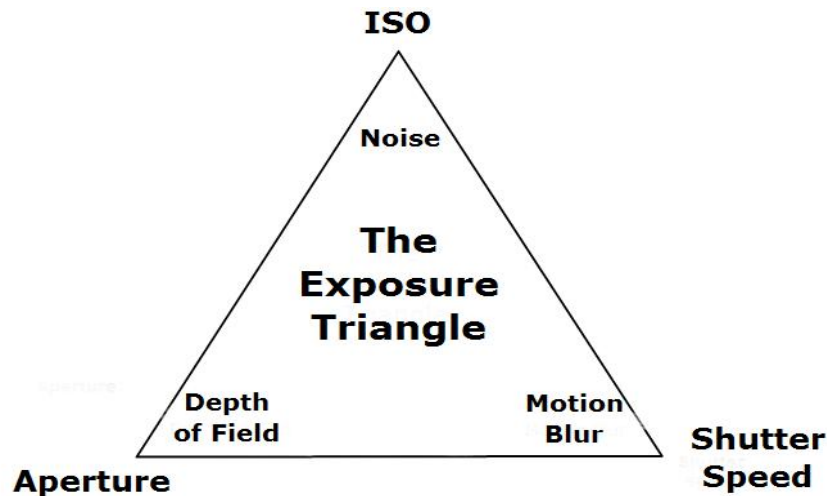


INTRODUCTION TO DIGITAL PHOTOGRAPHY

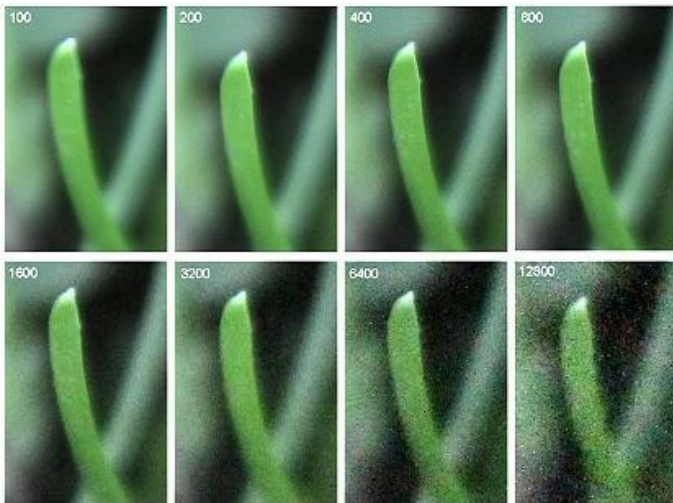
Camera Basics

- The exposure triangle
 - Depth of field
 - Macro
 - Shooting modes: Automatic, AV, TV, Manual
 - White balance
 - Holding the camera, angles, and position
-

The exposure triangle



ISO



- Film speed, sensor sensitivity: 100, 200, 400, 800, 1600, 3200
- Each setting is double or half the brightness than the previous
- Low ISO = sharper pictures
- High ISO = lowers the light you need
- Trade off: while it offers more flexibility, the higher the ISO, the grainier the picture

Rules of Thumb

- Use a tripod if you can
- Try to shoot with the lowest ISO possible
- Rest camera on a solid surface if there's no tripod
- Hold your breath

Shutter Speed

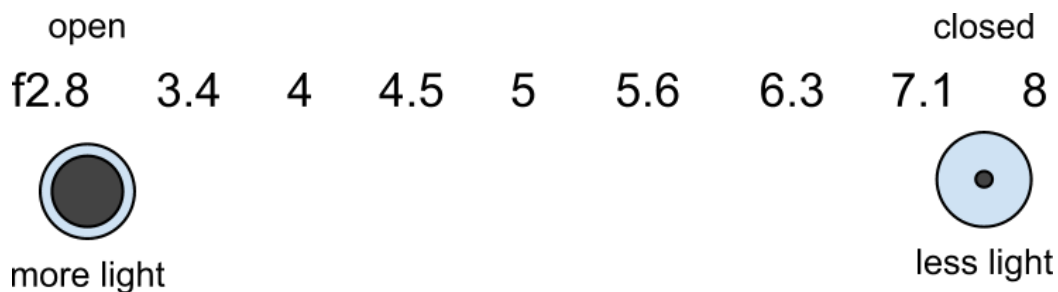
- Refers to how much time the shutter is open (in seconds)
- 1/4000, 1/2000, 1/1000, 1/500, 1/250, 1/125, 1/60, 1/30, 1/15, 1/8
- 1 second, 10 seconds, 30 seconds etc
- Faster shutter speed = freezes action, less light
- Slower shutter speed = motion blur, more light
- Most cases, use 1/60th
- Less than 1/60th will probably cause camera shake.



Rules of thumb

- Use image stabilization
- Are things moving?
- Focal length: the longer the lens, the more shake
- Use a tripod!

Aperture



- "The size of the opening in the lens." Measured in f stops
- Double or half the light depending on which direction you go
- The larger the aperture, the more light that comes in
- Smaller the number, the larger the aperture (confusing!)

Depth of field

- In simple terms, depth of field is the zone of sharpest focus in front of, behind, and around the subject on which, when lens is focused on a specific subject.
- The smaller the aperture, the larger the depth of field.
- The larger the aperture, the shallower the depth of field.
- For example:
f2.8 - large aperture, shallow depth of field
f8 - narrow aperture, large depth of field



Shallow depth of field

Rules of thumb:

- Larger the number, the smaller the aperture
- Good to use for focusing attention on something
- Aperture and shutter speed go hand in hand



Large depth of field

Macro

- This means getting really REALLY close to subject
- Typically a setting on a camera
- Need plenty of light, very little movement
- Low ISO, or keep the ISO on Auto





Shooting modes: Auto, AV, TV, Manual

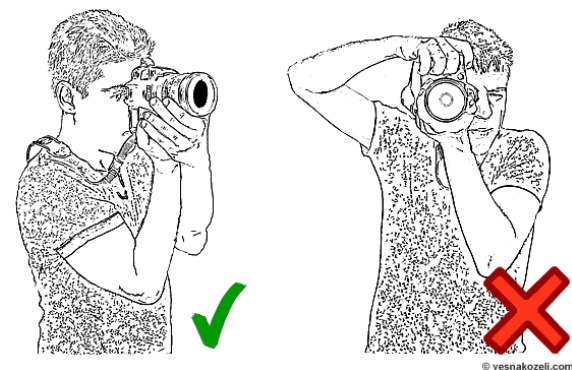
- Auto: adjust nothing
- AV: Aperture Priority, adjust the aperture, the camera adjusts shutter speed
- TV: Shutter speed priority: adjust shutter speed, the camera adjusts the aperture
- Manual: adjust everything



White Balance

- Defines what the color white looks like in specific lighting conditions
- Also affects the hue of all other colors.
- When the white balance is off, digital photos may appear to have a certain hue cast over the image.
- For example, fluorescent lights may cause images to have a greenish hue, while pictures taken on a cloudy day may have a blue tint.

Holding the Camera, Angles and Position



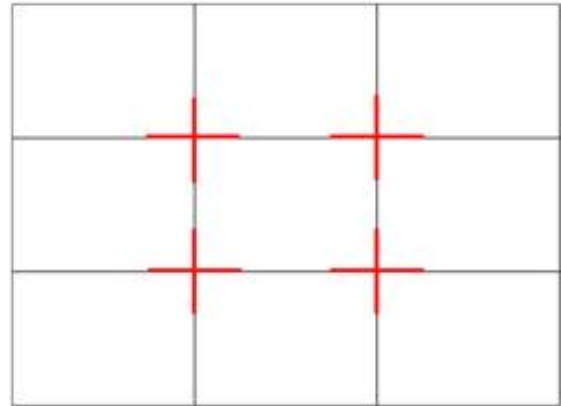
Composition

- Rule of Thirds
- Types of shots

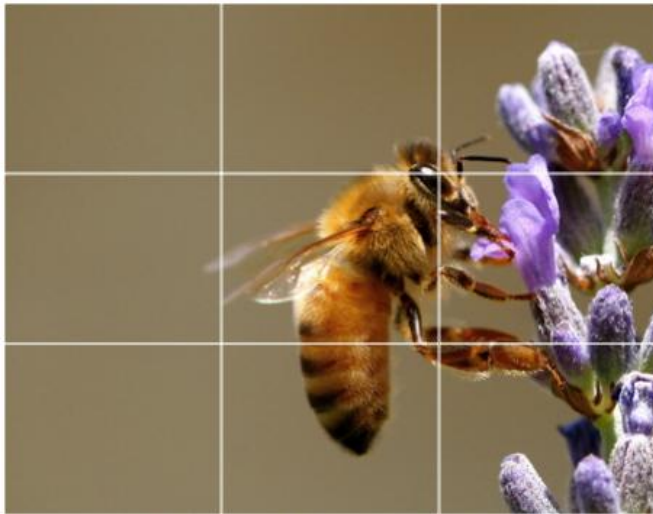
- Choosing subjects
- Think like a painter

Rule of Thirds and Creating a Center of Interest

- Create a focal point or emphasis using the elements of design (such as line, color, texture and size)
- Draw the eye in
- Add emphasis
- Use a technique such as the rule of thirds



Use the Rule of Thirds



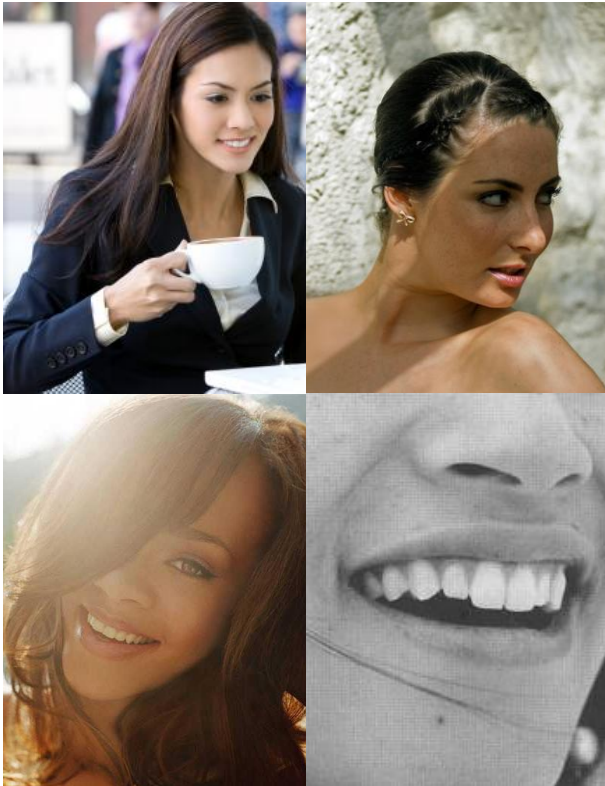
Applying the thirds frame to a photo



Where is the eye drawn in this photo?
Where is the center of interest?

Types of Shots

- Extremely wide - subject not visible
- Very wide - subject is barely visible
- Wide - subject takes up the whole frame
- Medium- shows part of the subject with the impression of the whole
- Medium close up - chest and shoulders
- Close up - certain feature or part of subject takes up the frame
- Extreme close up - shows a lot of detail of subject



Choosing Subjects

Rules of thumb:

- What are you shooting? People? Buildings? Wildlife? Nature?
- Keen observation: look at things from different vantage points
- How's the light?
- Remember the rule of thirds
- Tripods are always helpful

Think like a Painter

Use:

- Lines
- Shapes
- Color and light
- Brightness and contrast
- Energy and movement
- Balance and symmetry



Lines

- Can provide a sense of direction
- Guides the eye to a center of interest or focal point



Shapes

- There can be “visual strength” in repetition
- Shapes can provide a center of interest or focal point



Color and Light

Can be used together to add emphasis to a composition.



Brightness and Contrast

- Juxtaposition of dissimilar elements, especially with light
- Creates tension or discord, but can also create balance
- Common Contrasts:
 - Light and dark
 - Organic and geometric
 - Soft and hard



Contrast used: light and dark,
soft texture, hard lines

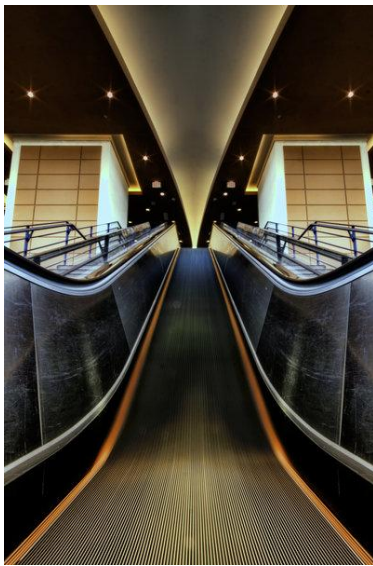


Energy and Movement

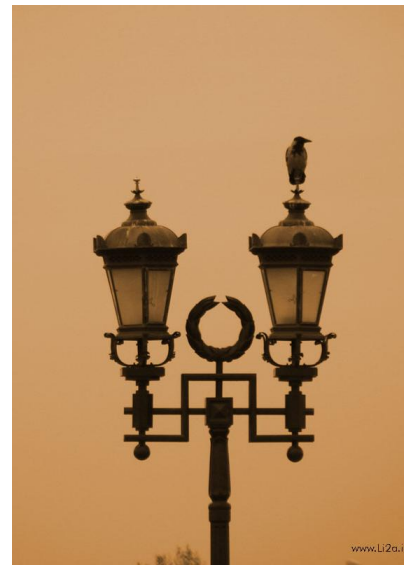
- Gives energy to static images
- Can direct the eye
- Highlights focal points

Balance and Symmetry

- Pleasing to the eye
- Or, alternatively, use asymmetry to offset the center of interest



Symmetry



Asymmetry

So now what?

When you take photographs...

- ✓ Remember the exposure triangle
- ✓ Pay attention to focus and depth of field
- ✓ Get close if you need to!
- ✓ Choose your shooting mode depending on the situation.
- ✓ White balance
- ✓ Hold the camera properly
- ✓ Be intentional about your composition
- ✓ Apply the rule of thirds to create a center of interest
- ✓ Select the type of shot and your subjects carefully.
- ✓ Think like a painter! Explore lines, shapes, color and light, brightness and contrast, energy and movement, and balance and symmetry.