Beginners' Photography Workshop

learn to take better photos of your everyday

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PHOTOGRAPHY

We’re going to talk about how to use your camera as a tool to turn what you see with your eyes into a photo.

You'll learn how you can start capturing the ***most*** important things in your life.

You'll leave here today with knowledge
- no matter what kind of camera you use -
that will improve your photos right away.

Topic Lineup

- Technical portion & practice
- Creative side
- Working with people
- Q&A

Now get out your cameras.

The Techy Stuff

- Lenses
- Shooting Format: RAW vs. JPEG
- Focusing
- Exposure Triangle and Depth of Field
- Camera Shooting Modes
- White Balance

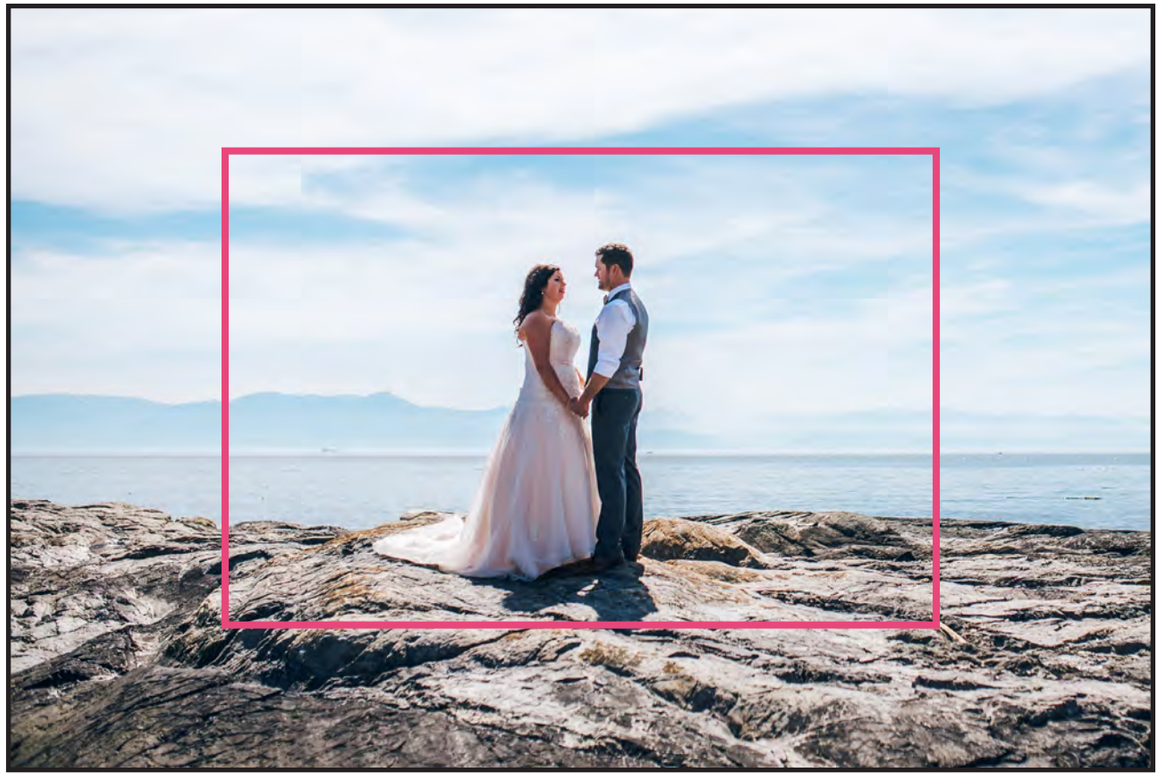
Choosing the Right Lens

- Zoom lenses provide ease of mobility and are great for photographing motion (kids playing, sports)
- Prime lenses produce sharper images and let more light in
- Focal length is a creative choice
- Longer length = more zoomed in and narrower view.
- Shorter length = wider view. Great for indoors, 35mm will let you see most of a room indoors.

Lens Distortion

Crop Factor

- Full frame cameras have a sensor the same size as a 35mm film frame, so lenses are the same on a film SLR and full frame DSLR.
- Entry level DSLR cameras typically do not have full frame sensors.
- A 50mm lens is like an 80mm lens when using a APS-C (1.6x) crop sensor. Some crop lenses are different.



File Format: RAW vs. jpeg

- jpeg is what most images are shot and shared in, like phone images
- jpeg compresses and processes images
- RAW files are kind of like film negatives. They allow/require you to control the way they're edited and give better image quality.
- RAW files are easier to save if you mess up exposure
- With RAW, you usually need editing software to open files
- You will save images as jpeg after editing in order to share/print

Choosing Your Focal Point

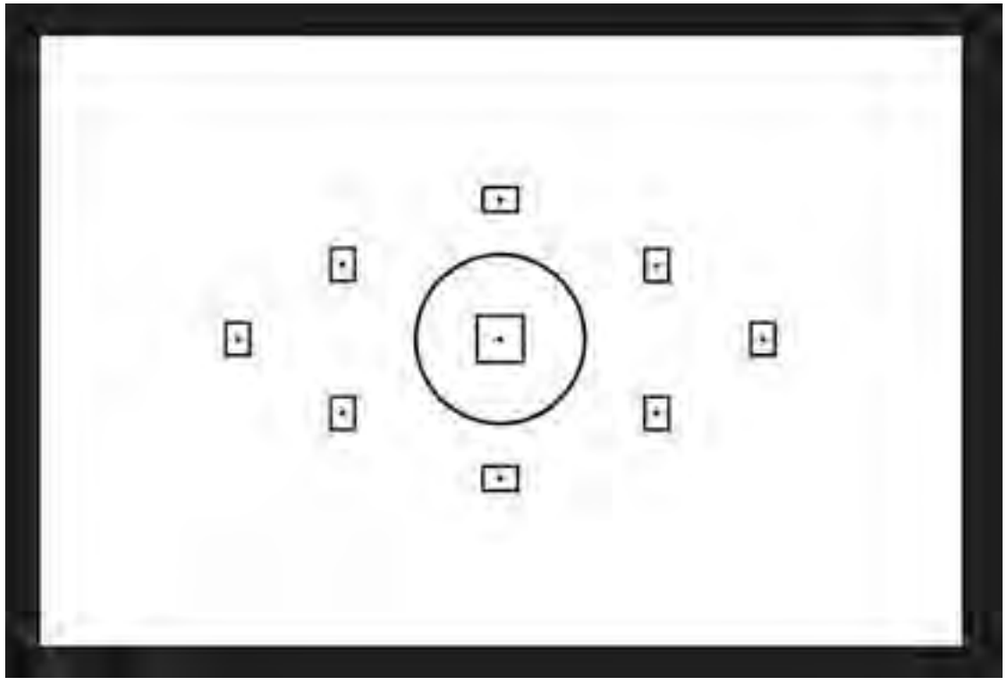
You got this.

You wanted this.

You can fix this with: using a single focal point and moving it onto your subject.

How to Focus

- Manual/auto switch on your lens - always on auto unless using a tripod.
- Choose your focal point by turning the spot focus on within your camera, otherwise the camera chooses.
- The small wheel next to your viewfinder is a diopter and controls how you see focus, but doesn't affect actual focus.



Focusing Tips

- Choose an area of contrast, like between two colours or on a shadow, so the camera can grab focus easily.
- Always focus on the front eye if it's a photo of a person.
- Sometimes the camera can't focus if it's too dark, so use a flashlight or your phone to light and grab focus, then turn it off to take the photo. Some cameras have focus assist beams.
- Your lens has a point where it can't focus too close to an object.
- You can try continuous focus for moving objects.

Why Learn to Shoot in Manual Mode?

You got this.

You wanted this.

You can fix this with: manual exposure or exposure compensation, spot metering.

What is a correct exposure?

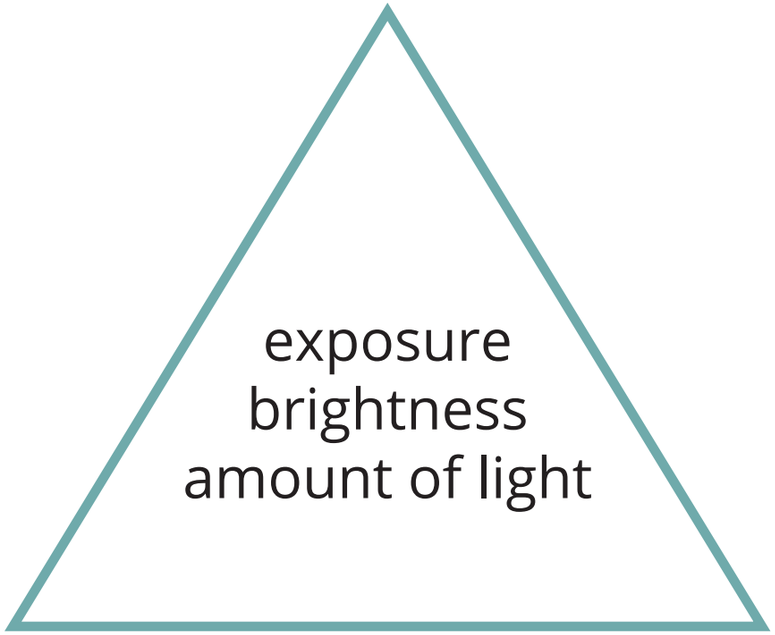
overexposed

underexposed

properly exposed

- Exposure is an artistic choice. Typically you will expose for your subject.
- Overexposed and underexposed images can have loss of detail in highlights or shadows.

The Exposure Triangle



ISO
- sensor noise/ grain

Shutter
- motion blur
- camera shake

Aperture
- background blurriness
- depth of field

ISO

100
200
400
800
1600
3200
6400

Best Quality

Highest Light Sensitivity

- ISO is sensor's sensitivity to light.
- Higher ISO has more noise/grain.
- Keep the ISO low, if possible.

ISO 100, 1/500, f2.0, 35mm

ISO 400, 1/200, f4.0, 35mm

ISO 800, 1/320, f2.0, 50mm

ISO 3200, 1/125, f2.0, 35mm

Practice ISO

Put your camera in manual mode.

Adjust your ISO and take a photo.

Look at the preview. Is it over or under-exposed? If so, choose a new ISO that will bring you closer to a proper exposure. If it's properly exposed the first time, just change your ISO to underexpose.

Check the preview to make sure you moved in the right direction.

Shutter Speed

	4000	Less Light Freezes Motion
	2000	
	1000	
	500	minimum for fast human action
1/2 light	250	recommended for handheld
1stop	125	
	60	minimum for handheld
1stop	30	
	15	visible action blur
2x light	8	
	4	
	2	
	1″	
	2″	
	4″	More Light Blurs Motion

1/800, f4.0, ISO 100, 35mm

1/40, f2.0, ISO 800, 35mm

0.6″, f3.2, ISO 640, 35mm

Motion Blur & Shutter Speed

You got this.

1/640 exposure, f2.8

You wanted this.

1/100 exposure, f2.8

Practice Shutter Speed

1. Put your camera in manual mode. Set your ISO based on lighting and aperture to lowest value. Take a photo and do the same as in the ISO exercise (check preview, adjust shutter speed until you have a proper exposure).

2. Put your camera in Shutter Priority mode. Start with a shutter speed of 1/15, take a photo of a moving object. Increase by one stop and take another. Repeat until motion is frozen.

Aperture

full stop | full stop

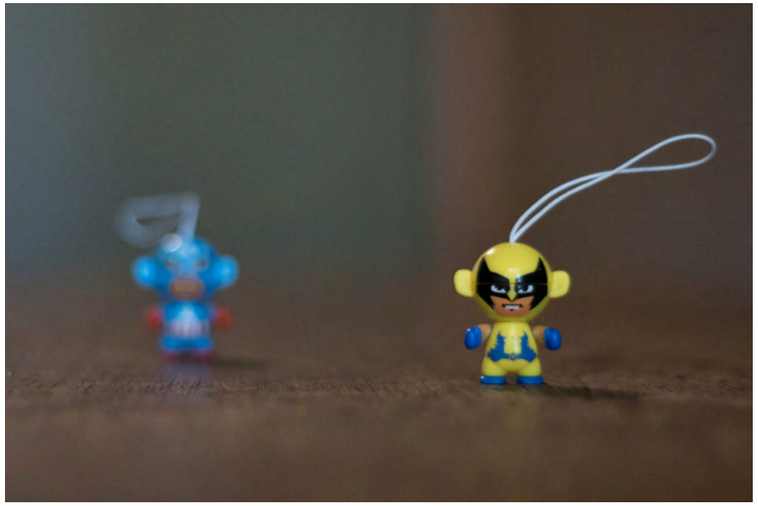
2x light ⟷ | ⟷ 1/2 light

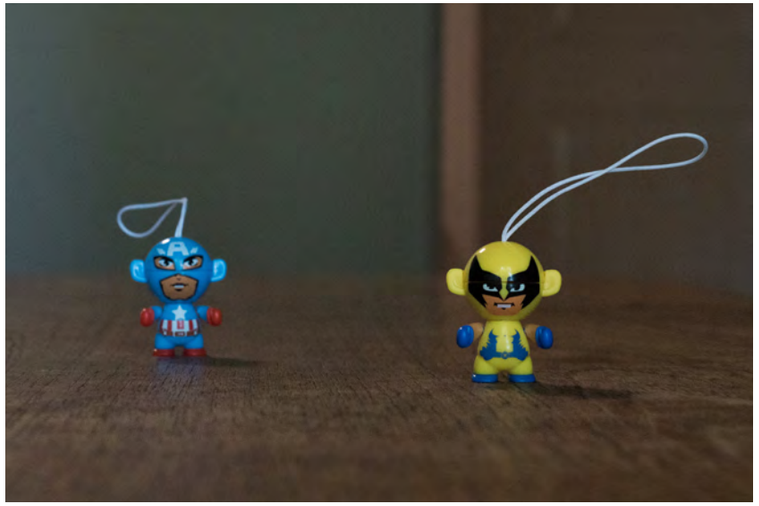
f1.4 f2 f2.8 f4 f5.6 f8 f11 f16 f22

more light ⟷ less light

less depth of field ⟷ more depth of field

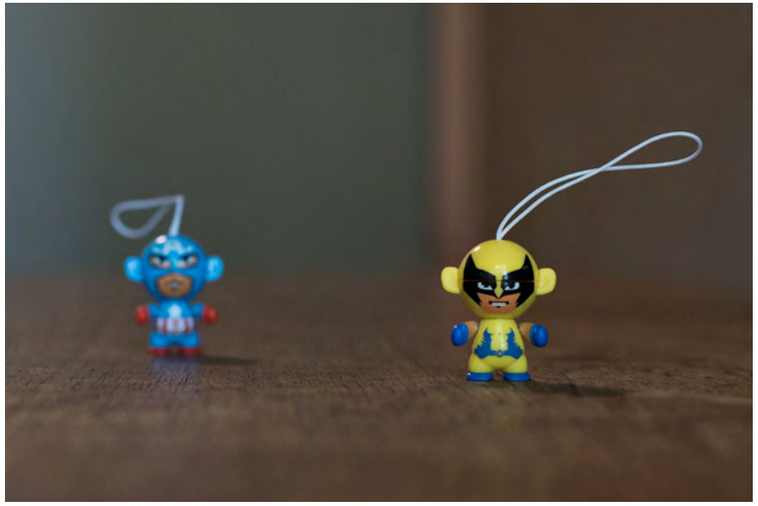
f1.8,
1/800,
ISO 1600





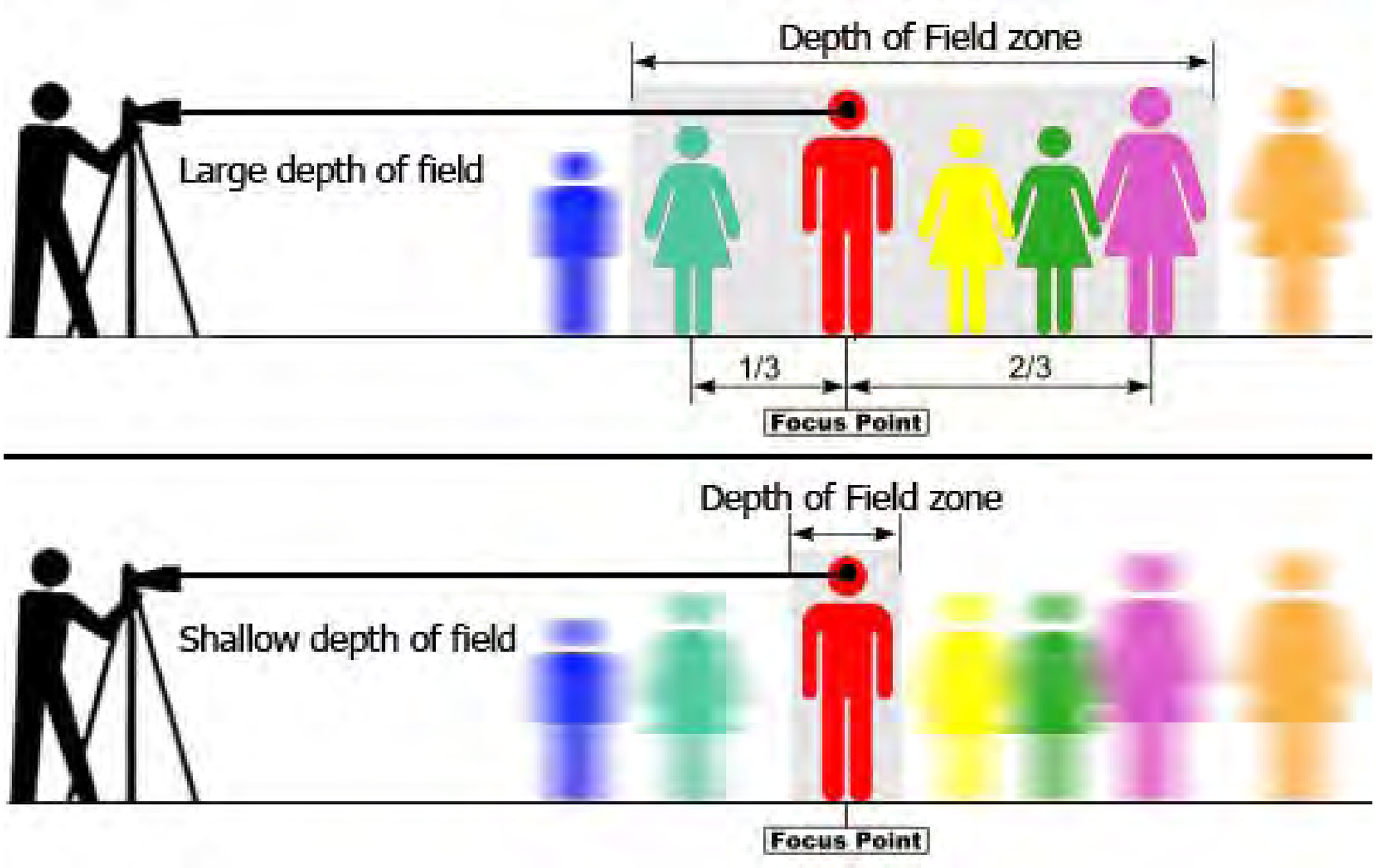
f8,
1/100,
ISO 4000

f3.5,
1/200,
ISO 1600



f16,
1/40,
ISO 6400

Aperture: Depth of Field



Practice Aperture

1. Put your camera in manual mode. Guess your ISO based on lighting, set your shutter to 1/250, and aperture to f8. Do the same as the previous exercises (take a photo, preview, adjust aperture until properly exposed).

2. Put your camera in aperture priority mode. Put your aperture at the lowest value and take a photo of something in front of a background/object. Close down the aperture two stops and take a photo. Repeat a few times. How does aperture affect your depth of field?

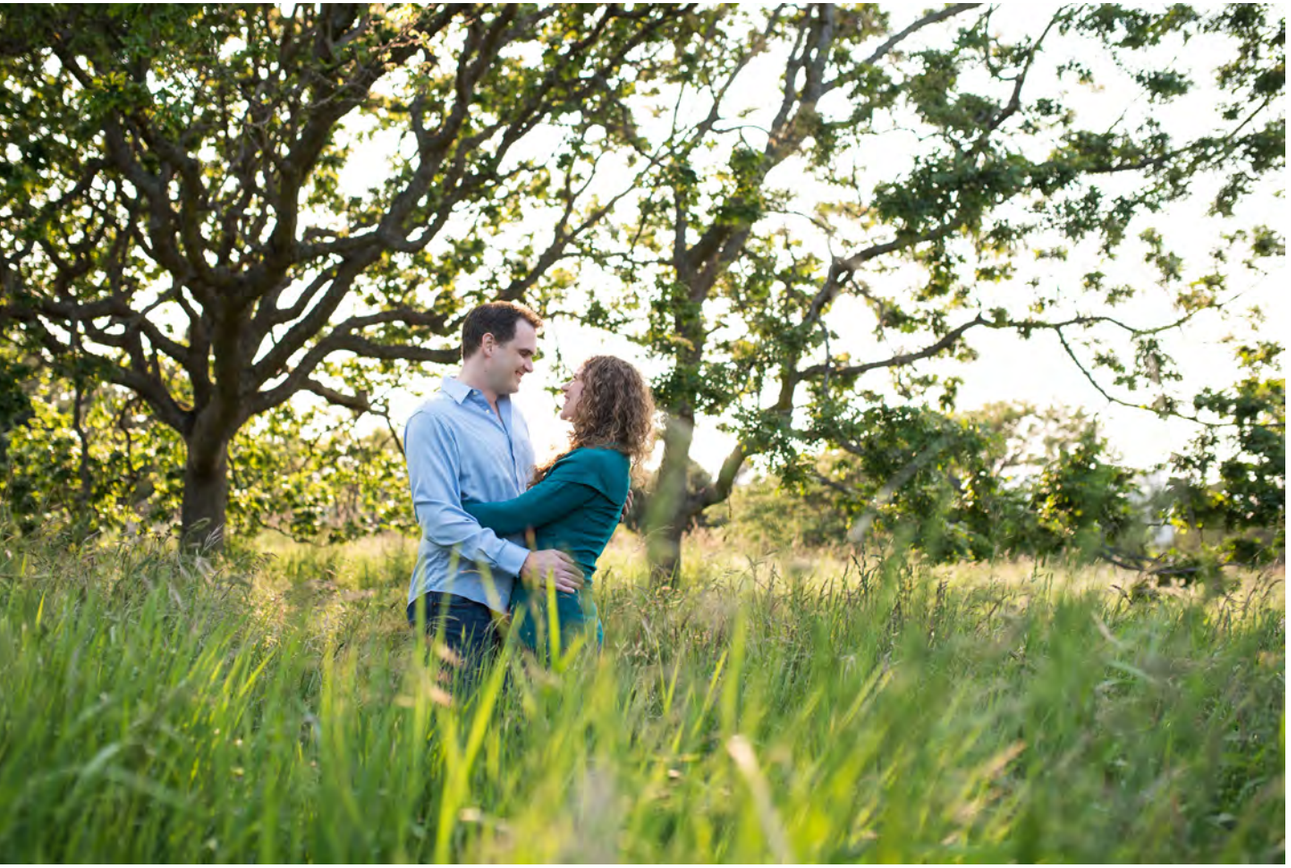
Depth of Field

factor	**less depth of field** (blurry background)	**more depth of field** (sharp background)
aperture	lower number	higher number
lens focal length	longer lens	shorter lens
distance from camera to subject	closer to subject	farther from subject
distance from subject to background	subject farther from background	subject closer to background

35mm lens, f4

35mm lens, f1.6

Longer Lens = Blurrier Background



35mm lens at f2.0

85mm lens at f2.0

Longer Lens + Closer to Subject

35mm lens at f1.8

135mm lens at f2.8

f1.8,
1/160,
ISO 1600

f8,
1/60,
ISO 12800

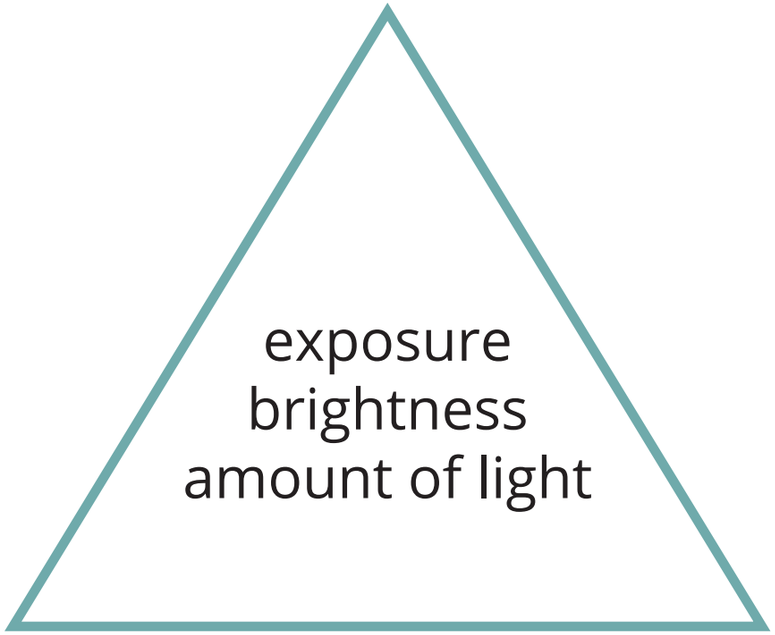
Practice Depth of Field

Put your camera in aperture priority mode. Set your aperture as low as possible. Take the following:

- A photo from far away and one from close up
- A photo with an object near the background and one with it far from the background
- A photo with a wide focal length and one with a long focal length.

How do these things affect your depth of field?

The Exposure Triangle



ISO
- sensor noise/ grain

Shutter
- motion blur
- camera shake

Aperture
- background blurriness
- depth of field

The Light Meter

The camera tries to make the metered area 18% gray.

18% gray, or “middle gray”, is about halfway between white & black.

When the marker is in the middle, the exposure is “correct” according to the camera.

If the marker is to the right, or plus sign, the image is overexposed (or too bright).

If the marker is to the left, or negative sign, the image is underexposed (or too dark).

How to Meter

To get a correct meter reading:

- use spot metering to control the area you're metering for (about 1-5% of the viewfinder)
- get closer if your desired metering area is smaller than the spot
- expose for skin for a typical portrait
- usually meter on highlights
- place your focal point over your metering area (or for Canon, your center point) and press the shutter halfway

Practice Reading the Meter

1. Put your camera in Aperture Priority mode. Press the shutter halfway to activate the meter. Point your camera at a dark area and then a light area. Note how the shutter speed changes.

2. Put your camera in Manual mode and repeat the above. Notice how the meter reading changes.

Determining Exposure

To find your exposure, here are some steps to follow.

1. Set your ISO based on the brightness of your subject/room. Outside, start at ISO 100 or 200. Inside, start at ISO 800.

2. Choose your aperture based on how blurry you want the background to be, or choose your shutter speed based on whether you want to show motion blur or not.

3. Adjust the remaining setting to get the meter to zero/center.

4. If you still can't get the meter to zero, check the LCD to see how off you are. Then consider changing one of your first two settings again, most likely ISO.

5. Take a photo and check the LCD.

6. If the image is too dark or bright, change your settings to fix it.

Thoughts on Learning Manual

- Be patient with yourself.
- Practice daily!
- Learning manual settings is like learning a small second language. Eventually, it'll click and you'll be able to move the dials and make settings instinctively.
- Once you understand manual, you can use other modes in different scenarios and know why the camera behaves the way it does.

Practice Time!

- You've most likely found your settings before the class, per my e-mail, but this will give you a chance to ask me or other students about ones you couldn't find, or look them up in your manual.
- Start with ISO, then think about what is most important - aperture or shutter?
- Adjust all of the settings until you get a properly exposed photo.
- Play around with different lighting and depth of field.

Camera Shooting Modes

Scene or a symbol	• Preset scene modes - auto with predetermined settings for typical scene
Auto	• Auto - the camera does all the thinking
P	• Program mode - chooses aperture and shutter speed, but you control flash, ISO, and focal points
Av or A	• Aperture priorty - you control aperture, camera chooses shutter
Tv or S	• Shutter priority - you control shutter, camera chooses aperture
M	• Manual - you control everything

Auto Exposure Lock (AE Lock)

- When you use any mode except manual, you exposure can change from shot to shot because your camera may be metering off of something different each time.
- To keep the same exposure, check if your camera has a feature called AE Lock. Assign it to a button if it's not already. Press that button once you have a meter reading on your subject and it will lock the exposure. You can then keep taking photos with the same exposure.
- In manual mode, you don't have to lock exposure since the settings won't change without you changing them.

Exposure Compensation

- When you're using a mode other than manual, sometimes the camera over- or underexposes the image. To correct this, you can set exposure compensation.
- The exposure compensation button usually looks like square with a plus and minus symbol on black and white backgrounds. Press this and turn your shutter wheel to change the desired exposure. Watch your meter to see how much and in which direction you're changing it.
- If your image is too bright, adjust your exposure compensation in the negative direction to darken it and vice versa.

Setting Your White Balance

You got this.

You wanted this.

You can fix this by: learning how to change your white balance or shooting RAW format.

In-Camera Colour Control

- Controlled by white balance setting
- How white are your whites? What do skin tones look like - normal or green, grey, or orange?
- Auto white balance generally does a great job, but use preset white balance if auto doesn’t look right
- Colour temperature is measured in Kelvin
- 2000 (very cool - blue) to 12000 (very warm - yellow) - set manually using live view

Mixed White Balance

The Fun Part - Creative Segment

- These are topics you can implement easily today, even with your cell phone camera
- I guarantee you'll walk out of here a better photographer knowing this part, even if you don't understand the technical side
- These topics are also where YOU come in as the artist

Creative Portion

- Natural expressions
- Props and environment
- Composition
- Light

Natural Expressions

How to Get Natural Expressions

- Wait for it! Shoot through the moment.
- Play with kids or talk to your subjects
- Get people to interact with each other, or just observe them doing so
- Never say “say cheese!” - candid or semi-candid has more personality
- Other factors when working with kids
    - timing - when is your/the child the happiest?
    - expect resistance - don’t push them

Props and Environment

Props and Environment

- Look for things that will evoke a memory over things that just look cute or interesting
- Look for locations that make sense over prettiness - this will help you or your subjects step back in time

Composition

- Rule of Thirds
- Watch for clutter/distractions
- Try to get horizons and lines straight
- Use framing, leading lines, & negative space to draw the eye to your subject
- Balance the frame

Rule of Thirds

Rule of Thirds

Removing Clutter

Horizons

Leading Lines

Framing

Framing

Framing

Negative Space

Balance the Frame

Ways to Draw the Eye to Your Subject

- Focus
- Lighting
- Framing
- Composition
- Negative Space
- Colour

Tell the Story in Different Ways

- Change things up - near, far, above, below, and move around
- With kids especially, get down on their level
- Include extra information that adds to the story
- Cut out information that isn’t relevant

Change Your Distance

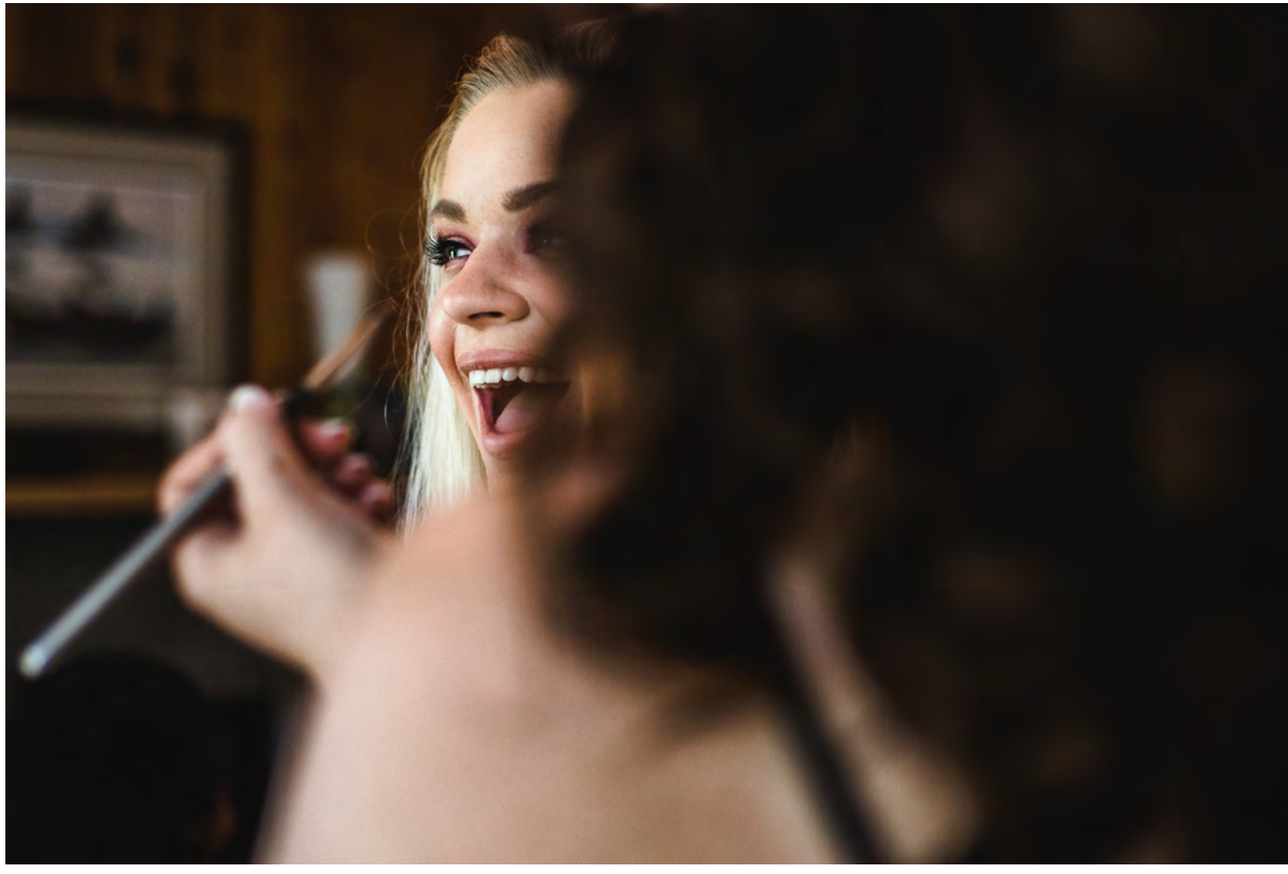
Get Up High

Get Low

Get Down to Your Subject's Level

Include Extra Info to Tell the Story

Get Close to Focus on Emotion



Reflections

Light

- Catchlights
- Backlight, silhouettes, & rim light
- Hard light - full and high sun
- Overcast and shade - open light
- Directional light
- Dappled light
- Spot light / pools of light

- Light is key to a great photo
- Become a student of light - look for it always
- Observe where light is coming from, where it falls, and its intensity

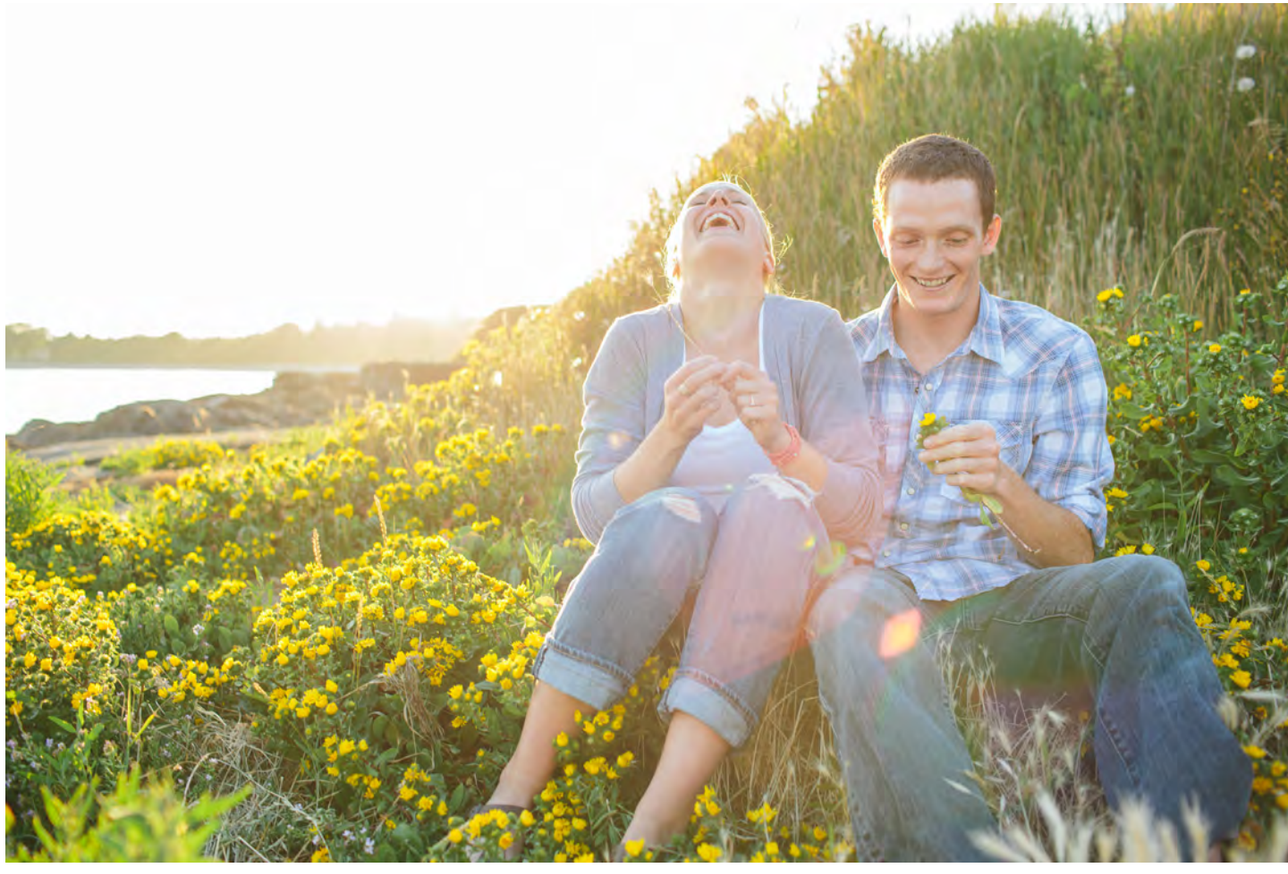
Catch Lights

Backlight - Silhouette

Backlight - Light Behind Subject

Backlight - Rim Light

Hazy Backlight



Window Backlight

Backlight and Blue Sky

Hard Light - Light on Subject

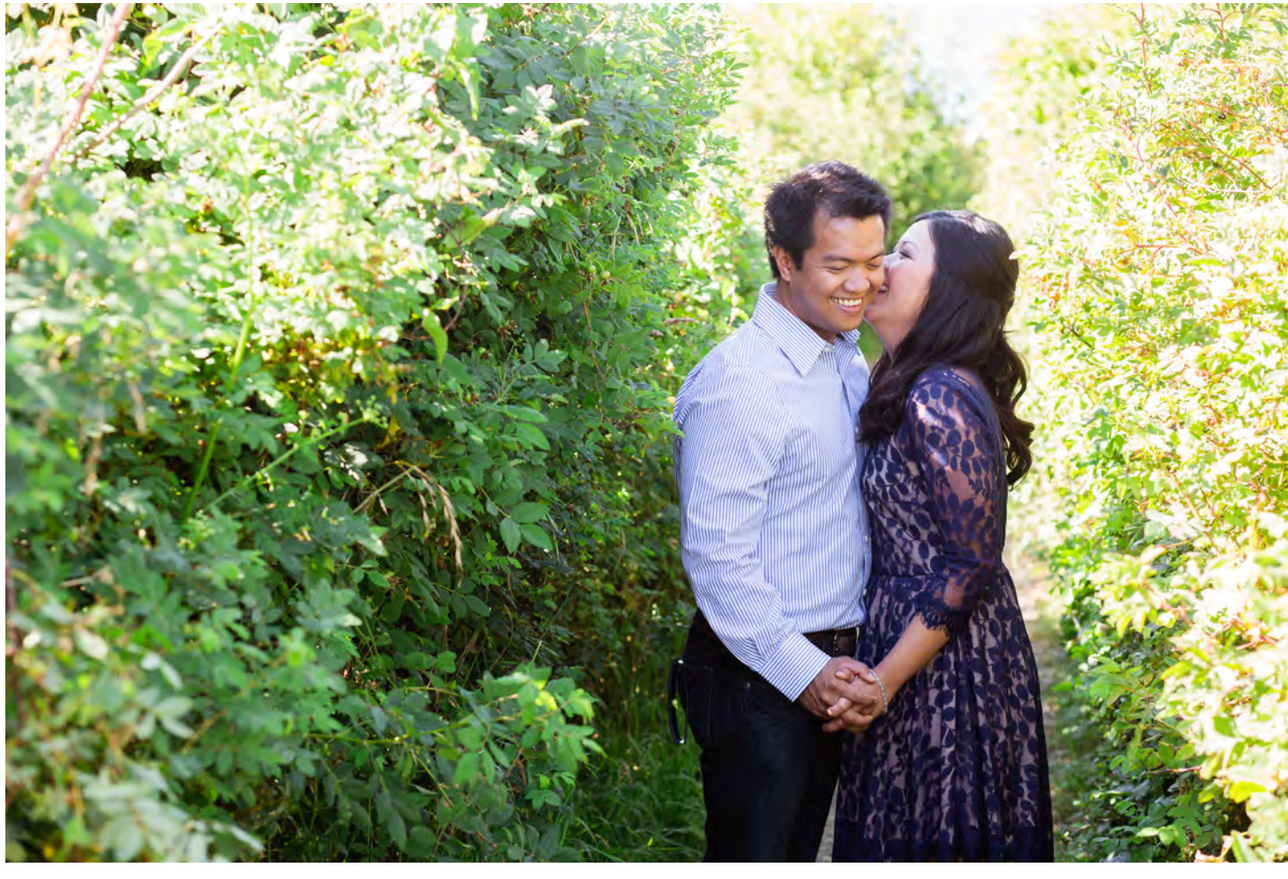
Hard Light Candids

Hard Light - High Noon

Front Lit vs. Backlit

Open Light - Overcast

Open Light - Shade



Dappled Light

Directional Light - Window Light

Spotlight - Pools of Light

Eventually, you'll be able to manipulate your camera settings with artistic intention & the techincal part will be automatic

Flash to Clean Up Shadows

Flash to Clean Up Colour

How to Set Up a Shot

- Where is the light coming from?
- How is the light falling on your subject?
- What message are you trying to encompass in the photo?
- What lighting best fits the story? What composition?

Decide What to Shoot

- What makes a great photo?
    - LMC - Light, Moment, Composition
- How do you get more meaningful photos?
- How does your own voice apply to your photos?

After Today

- Practice, practice, practice!
- To be held accountable and continue learning, join our facebook group, which I'll e-mail to you later.
- In the group, share your photos! I will cheer you on and critique when requested.
- We will have occasional free photo walks where I'm available to answer any questions.