

Posing Girls

- Hips. vs Waist - Always have them put their hands on their waist vs. their hips. It is a lot more flattering.
- Slightly lean towards the camera
- Toes pointed at an angle is more flattering with a twist at the torso Pop/bend knee that is closest to the camera
- Soft hands/fingers
- Try to always have space between arms and body when you can to make arms look slim. Use a step ladder to open eyes up and have a more flattering angle

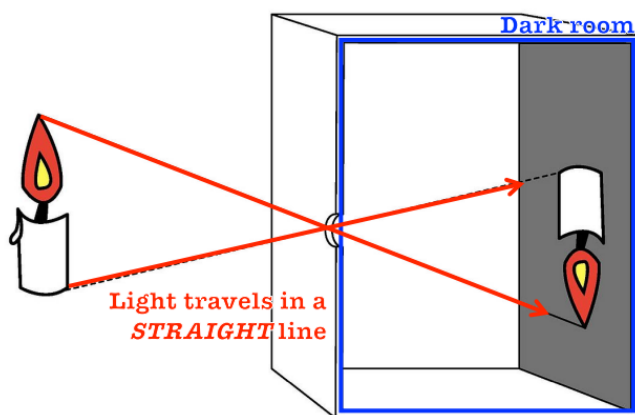
Posing Boys

- Shoulders square to the camera as much as possible.
- Slightly lean towards the camera
- Feet shoulder-width apart
- Hands in pockets with thumbs out
- Relaxed hands
- Space between arms and body
- Use a step ladder to open eyes up and have a more flattering angle

History of Photography:

Camera Obscura – 5th Century BC

- There were mentions of the camera obscura in ancient Chinese writings.
- Mo-Ti discovered that when one made a hole in the wall of a completely dark room, an inverted image of the outside scene would be displayed on the opposite wall.



Camera Obscura 10th Century AD

- Camera Obscuras were not studied again until the 10th century when philosopher, scientist, astronomer, and mathematician Alhazan developed a scientific method through experimentation to explain how the light travels in a straight line.

Camera Obscura 16th Century AD

- Many artists are thought to have used the camera obscura as a tool to create exact likenesses of their subjects.

Adding Chemistry (1727)

- A German professor named Johann Heinrich Schulze used silver salts in his experiments.
- He noted that the salts darkened areas of the image when they were exposed to light.
- He created crude photographic impressions, but eventually, his images turned completely black due to the exposure to the light.

Adding Chemistry (1826)

- Joseph Nicephore Niepce [zhawzef nee-sey-fawr nyeps] recorded the FIRST photograph.
- He used a plate covered with bitumen (an asphalt used in ancient times as a cement or mortar) inside a camera obscura.
- This is the FIRST recorded image in history. It took 8 hours to take the picture!



Daguerreotype (1838)

- Louis Daguerre partnered with Niepce for a short while.
- Shortly after Niepce's death, Daguerre developed a method of capturing a image in only a half an hour.
- This is the FIRST EVER photograph of a human being. He was getting his shoes shined, so he was still long enough to be captured in the photo that took half an hour. Other people walked the streets

during the photograph but weren't still long enough to be captured.



- This was the Daguerreotype Camera.



Types of Later Cameras

- Compact – fully-automatic settings, little to no manual settings, pocket sized
- DSLR – allows complete control of all the camera functions, usually heavy
- Bridge – pocket sized camera with some manual settings
- Mirrorless interchangeable lens – advanced enough to have multiple lenses, but small and lightweight

Larger camera sensors mean higher quality images and larger printing capabilities.

Megapixels = millions of pixels

A **pixel** is a tiny colored square that makes up an image.

You want more pixels in your camera if you need to crop and edit your images or if you want to print bigger photos.

Beginning Photography Vocabulary

DSLR – Digital Single Lens Reflex. A type of camera that uses mirrors to reflect the image through the lens and back to the viewfinder. These cameras have larger sensors than most point-and-click cameras so they can create a much higher image quality, even with the same pixel size.

Aperture – The hole that lets light into your camera. It can be adjusted to various widths that are known as f-stops.

Shutter – The apparatus that opens and closes to let light into your camera. It can be set to different speeds.

Film Speed (ISO) – This used to be the rating of an individual roll of film. In a digital camera, it refers to your camera's sensitivity to light.

Light (Exposure) Meter – A scale that measures the amount of light that is currently being let into your camera. It will tell you if you have too much, too little, or just enough light.

Depth of Field – How much space in the photo is in focus. If the background, middle ground and foreground are in focus, it is a wide depth of field. If only one slice of space is in focus, it is a narrow depth of field (also known as selective focus). Depth of field is controlled by the aperture.

Photo Noise – This refers to a loss of smoothness and crispness in a photo as you raise the ISO.

In Focus – the area of the photo that is sharp (you can see it most clearly)

Shutter speed – the length of time that the shutter is open and the camera sensor is exposed

Exposure – the level of brightness of a photo

Over-exposed – the photo has been too exposed to light, making the photo too bright

Under-exposed – the photo hasn't been exposed to light long enough, making the photo too dark

Aperture Priority Mode - You will hear photographers saying this is the only suitable auto mode. That's just not true. You should select this mode when you're worried about the depth-of-field. If there are concerns about the shutter speed becoming too slow, set the ISO to Auto.

Shutter Priority Mode - Choose this selection when subject movement or camera movement (low light) is a concern. Set the shutter speed to your desired setting. If the aperture isn't closed down enough to your liking, then increase the ISO setting.

Manual Mode - So many photographers say that this is the only worthwhile mode because it's the only mode that gives you full control. We disagree (see the next three paragraphs). Manual Mode slows the shooting process down significantly if you aren't experienced. When photographing static objects like a landscape, manual mode is perfect. But, if you're photographing your son's first football game, you will likely miss the shot using Manual Mode.

In **Aperture Priority mode**, you can control what shutter speed is chosen by adjusting either the exposure compensation setting or the ISO setting, or both.

In **Shutter Priority mode**, you can control what aperture is chosen by adjusting either the exposure compensation setting or the ISO setting, or both.

In both cases, you can lock the setting by using the exposure lock function.

Scene Modes:

Macro/Close Up Mode - The camera sets the ISO, shutter speed, and aperture settings. You still have to focus the lens.

Landscape Mode - The camera sets the ISO, shutter speed, and aperture settings. It turns off the camera's pop-up flash. You must focus the lens on the subject.

Night Portrait Mode - This one works pretty well, especially if the scene isn't pitch black. Use this at dusk or in bright city lights at night. This mode turns on the pop-up flash and synchronizes with a slow shutter speed. It gives a sharp person and blurred background effect.

Portrait Mode - The camera sets the ISO and the shutter speed. In low light, it activates the pop-up flash. It sets the aperture to the widest available setting.

Sports Mode - Defaults to the widest aperture on the lens. It also sets a higher ISO number, and Auto selects a faster shutter speed.

f-stop controls:

- Exposure (how much light is let into your camera)
- Depth of Field (the area of your photo that is in focus)

1. TO CREATE SHALLOW DEPTH OF FIELD:



1. LARGE APERTURE (small f-stop number)
2. LONGER FOCAL LENGTH (zoom-in)
3. CAMERA CLOSER TO SUBJECT, SUBJECT FARTHER FROM BACKGROUND

2. TO CREATE LARGE DEPTH OF FIELD:



1. SMALL APERTURE (large f-stop number)
2. SHORTER FOCAL LENGTH (zoom-out)
3. CAMERA FARTHER AWAY FROM SUBJECT, SUBJECT CLOSER TO BACKGROUND

Remember, the lower the f-stop number (2.8) the LARGER your aperture and the SHALLOWER your depth of field.

The higher your f-stop number (22) the SMALLER your aperture and the WIDER your depth of field.

MODULE 1: LIGHTING AND LOCATION

Time of Day

Finding the perfect light is KEY to speeding up your editing process!

What time of day is recommended to shoot 95% of the time?

- 1-2 hours before sunset
- Why is this time of day such a good time? Softest light and more shade
- **Soft light** is filtered light. It is not too bright or harsh.

What is another great time of day to shoot?

- 1-2 hours after sunrise

The Perfect Light Shade is KEY! You want consistent light from head to toe and in the background.

Why is shade so good to work with?

- Gives us even light
- Way easier to edit
- Flattering on client skin
- Consistent light and images

Lights to Avoid

Avoid Spotty Sun

- It is distracting to the eye.
- Spots can end up on the client.

What can you do if you have to shoot in spotty sun?

- Use reflector (or anything you have) to cover up spots on clients

- Crop in tight to hide spots.

Avoid Break in Sun

- Sharp line where the sun meets the shade

What can you do if you have to shoot near a break in the sun?

- Step your client into the shaded area and avoid the break in sun line. Change your angle.

Avoid Direct Sunlight

- This is not flattering on the face of the subject! (causes squinting and light spots or shadows on their skin.)

Backlighting and Sunset

Backlight looks like a light halo behind someone. When would be the best time to shoot backlight?

For best backlighting- shoot right before sunset (1 hour or less)

It will not work great if you shoot too early in the day.

What is the first thing to do for backlighting?

- The first thing to do is to face client away from the sun.
- This is where you want to find that rim of light around your subject.

Avoid Lens Flare – hazy fuzzy feeling

- Use a lens hood
- Have the client stand and block the sun
- Put yourself in the shade if possible
- Use a reflector to block the sun
- Twist client or change your angle if needed

What do we do when the sun gets too low and dark?

- Flip the client around and have the sun hit their face (nice soft light)

Backlight and Sunset

Place client with sun behind and camera facing the sun. Client's shadow should be directly in front of them.

4 things to do:

1. Use a lens hood
2. Have client provide shade to lens (shift position)
3. Shift position so camera is in shade.
4. Use a reflector to block the sun.

Overcast Days

When can overcast days be tricky?

- If it's too dark you might have to increase ISO
- Avoid dark shaded areas. Find that open area.

What is the Ring Around the Rosie trick?

- Turn in a circle with client, looking at his/her face to see where the best light on the face is.

Use your reflector on overcast days to help shine some light onto your subject.

Middle of the Day

Find shade if possible!

If you have no shade, how should you face your client?

If your only choice is in the sun:

- Do NOT have them face the sun.
- Have their shadows in front of them.

Good Light vs. Bad Light

1. Sharp line between shade and sun is distracting in photos.
Turn the client so you don't see the break in shade/sun and are entirely in the shade.
2. Avoid spotty areas. Use reflector so at least the face is shaded and then crop in tight so the spotty areas aren't as noticeable.
3. Direct Harsh sunlight causes squinting and not flattering on face. Turn them so their back is to the sun and shadow is directly in front of them.

Natural reflectors

What is a natural reflector?

- Things that the client stands on or near to reflect nice light onto them.

What are some examples of good natural reflectors? (Something light colored)

- Gravel
- Concrete
- Light-colored buildings

What are some examples of bad natural reflectors?

- **Dark colors**
- **Reds**
- **greens**

Reflectors

What is a reflector?

When is the white reflector used? Don't use them much on sunny days except to block sun. Don't use with families because you can't light up everyone's faces.

What reflector side is used most often?

How should you use reflectors? Silver gives a cooler look on skin tone and gold gives a warmer look on the skin tone.

Zebra pattern – mix of silver and gold

Use white reflector on sunny day because it gives a more subtle brightness. Hold it eye level because it's more natural looking.

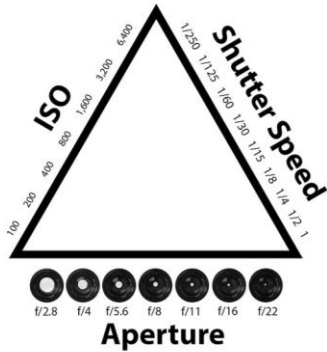
On cloudy days, the gold and silver zebra reflector works well.

Could also use reflector to provide shade on client.

MODULE 2: MANUAL MODE

Exposure Triangle

What are the 3 parts to the exposure triangle/manual mode?



All of these have to do with the amount of light entering the lens. All three parts of the exposure triangle will impact the brightness/darkness of your image.

What is the typical order in which to set the 3 parts?

1. ISO
2. Aperture
3. Shutter Speed

We rarely change our ISO or aperture during a session.

Step 1: make sure you are in manual mode (M on the dial).

ISO

- The camera sensor's **sensitivity to light**
- It will brighten or darken the photo as you adjust.

Lower ISO (100-200)

- The sensor is less sensitive to light.
- Used in good lighting situations (daylight).

Higher ISO (800+)

- The sensor is more sensitive to light.
- Used in poor lighting situations (dark outside, indoors, etc.).

Typical ISO settings

- We almost always shoot at 200 ISO 95% of the time.
- What is the exception – Super overcast or getting dark = 400

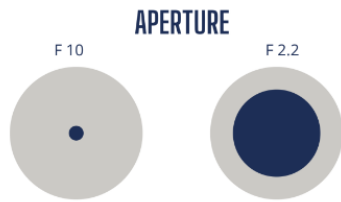
What can happen when you shoot at a high ISO?

- More noise/grain in your images

Aperture

What is another term for aperture? F-stop

Aperture refers to the opening of the lens through which light passes. Every lens has different apertures.



Lower F-stop (F2.2) gives more exposure and lets more light in.

Lower F-stop=large aperture

Higher F-stop (F10+) gives less exposure and lets less light in.

Higher F-stop=smaller aperture

Low F-stop: The lens is more open and there will be more blur (bokeh) in the background. Low apertures can create fuzzy images if your go too low.

High F-stop: The lens is less open and the background will be more in focus.

Aperture Settings

Why can't you always use a F2.2 when shooting? Because not everyone will be in focus.

Scenario	Aperture
1 Person	F1.8-F2.8
2 People	F2.5 to F3.5
Family	F3.5 to F4
Group on the same plane (one row)	F3.5
Two rows	F-5 or F6

Depth of Field

1. Lenses with lower apertures allow more for shallow depth of fields.
2. Distance from camera to client.
 - a. Closer to client= more blur
 - b. Further away=less blur
3. Distance from client and their background
 - a. Further from background=more blur
 - b. Closer to background=less blur
4. F-stop
 - a. Lower f-stop (2.2) can have a more dreamy background.
 - b. Higher f-stop (8) will have more in focus in the background.

To get a dreamy background (shallow depth of field)

- Use a lens with a lower f-stop
- Stand close to the client
- Pull client away from the background
- Lower f-stop setting

Shutter Speed

The length of time the shutter is open

Fast Shutter Speed (1/1000):

- Good for movement shots

- This will let **less** light in.

Slow Shutter Speed (1/30):

- Poor for **movement shots**
- This will let **more** light in.

DOUBLE THE LENS LENGTH

- 50 mm
 - Still shot 1/100
 - Movement shot 1/200 +
- 35 mm
 - Still shot 1/70
 - Movement shot 1/140 +

Too slow of a shutter speed will cause **blurry** images.

Shutter Speed and Exposure Meter

The exposure meter will change as you adjust your shutter speed with the black dial.

Ticks below zero mean that you are **underexposing** your image.

Ticks above zero mean that you are **overexposing** your image.

What is the goal when looking at your exposure meter? Set it to 1-2 clicks above zero

Putting it all together

1. Set ISO.
2. Set aperture based on what you're shooting.
3. Set exposure meter to zero or a couple clicks up.
4. Check if the shutter is fast enough.
5. If the shutter is too slow, increase ISO (typically done) or lower your f-stop.

Scenarios

Scenario	What can I do?
Photo is too dark.	Do one of the following: -Increase ISO - Decrease shutter speed (not too low though) -Smaller F-stop #
Photo is too bright.	Do one of the following: -Decrease ISO -Increase shutter speed -larger f-stop
Photo is too blurry.	Change to a higher f-stop OR Increase Shutter Speed

White Balance

What is White Balance? It balances all of the colors in your images.

What do we usually use for white balance? We usually use auto white balance AWB