

Lighting

- Without light there would be nothing to photograph

Awareness of Light

- Light builds emotion in photography.
- Without shadows, light is less powerful.
- Light has three different characteristics:
 - o Source
 - The color of the light can really change the feel of a photo.
 - Soft light is more sleepy, contemplative and warmer.
 - Harsh mid day light is bold, unyielding, energetic and busy while casting harsh shadows and muting color.
 - Sunset oranges are romantic, make subject's glow, and cast long shadows across the horizon.
 - o Strength
 - The amount of highlight or shadow depends on the intensity of the light source.
 - Hard light has very little distance between the highlights and shadows, making more contrasting, moody shots.
 - There is a longer and more subtle transition between the highlights and shadows in soft light. It is often good at hiding skin blemishes too.
 - o Direction
 - Front light, light coming from behind the camera and shining onto the subject, provides even lighting but is less dramatic because it lacks shadows.
 - Rembrandt lighting comes from an angle 45 degrees off of the subject's nose and creates a gradual shadow that adds depth and dramatics to the shot.
 - 90 degree lighting comes from beside (90 degrees) from the subjects nose and is extremely dramatic and striking but can be too moody for some subjects.
 - Backlight comes from behind the subject and creates shadows and silhouettes that cause depth and dramatics but can be hard to use effectively.
 - Light from above (mid day) is not flattering on faces (too much shadow and negative texture on skin) but is also dramatic.
- There is a flow to the way light moves through a photo.
 - o Light has an entry and exit point in photos that can be used to guide the viewer's eye through the photo.
 - o Try to use light as the eyes naturally see it.

Color of Light

- Light appears as color by reflecting off of surfaces.
 - o All colors of light are absorbed except red when light strikes a red apple.
 - o Only red is reflected, making the apple appear red.
 - o White objects reflect all colors of light.
- Every light source has a color temperature.
 - o This is the color of the light that is created.
 - o It's measured in Kelvin.
 - o Light that is a warm red has a lower Kelvin (around 3000) while white or neutral light is around 4000K and a cool blue light is upwards of 5000K.
- This temperature affects the feel of the entire photo.
 - o A photo shot in warm light is calmer, romantic.
 - o When cool light is present, the photo is mysterious, serious and desolate.
- A photographer has to decide what to do with this light.
 - o If the temperature enhances the mood the photographer may keep the temperature.
 - o If not, the color temperature can be changed using white balance.

Ambient Lighting

- This is the light that is present naturally without an additional light source.

- Morning light is whiter and better for landscapes and cityscapes.
- Midday sun has short dark shadows created by straight down light.
 - o This time is not good for shooting.
 - o It does create high contrast photos though.
- Low sun in the late afternoon is warm and cast long shadows. This is known as golden hour.
- It's not always possible to change the time of day when shooting but there are tools to help.
 - o Diffusers or fabrics that allow only some but not all of the light to pass through to the subject can cut down on the light.
 - o Reflectors or fill flashes can be used to limit the amount of shadow that is created by ambient light.

Direction of Light

- It's important to realize that ambient lighting cannot be moved so moving the subject and camera is the only way to work with it.
- Perhaps it's not worth the adjustment.
- Different angles of light can have benefits:
 - o Lighting from above is typically unkind to the subjects in portraits because of the harsh shadows it casts.
 - o Backlight is difficult to use effectively but makes powerful depth and shadows.
 - o Front light is easy to use and lights the subject well but is void of shadows and highlights.
 - o Side or 90 degree light is because it creates drama.
 - It provides a mysterious feel.
 - Highlights are on half the face with the other half engulfed in shadow.
 - o $\frac{3}{4}$ light, from the front and slightly to the side, is the most common for portraits.
 - It's very flattering for the subject.
 - It features an amount of shadow on one side with a triangle of light below the opposite eye.
 - Also known as Rembrandt lighting.
- Golden Hour is sunrise and sunset.
 - o Sun light crosses the longest distance, creating warm light and long shadows.
 - o This is the hour after sunrise and before sunset.
 - o The light is also much more soft, creating longer transitions between shadows and highlights.
- Prepare for the right lighting.
 - o The best photographers scout their shots in advance.
 - o Seeing where the light will be coming from, the best angle for camera location and contrast will give the photographer the best chance at using the short time golden hour or an odd pre-storm lighting.

Fog & Haze

- Particles suspended in the air (whether dust or moisture) can diffuse light and create eerie or mysterious photos.
- Light rays are more defined, creating a soft glow.
- These particulates can make metering challenging as the camera could focus on the fog rather than the subject.
 - o Auto mode may underexpose the photo.
 - o Often it's good to switch to a priority mode and intentionally add more exposure with a longer shutter or bigger aperture.
 - o Exposure compensation could be useful too.
- Contrast is often sacrificed in foggy environments, with limited depth.
 - o Move closer to the subject to make it sharper.
 - o Focus on shapes and silhouettes as they will provide more contrast.

Bright Light

- Don't avoid the bright light of mid day.
- It is stark and severe and can be used to create photos that show all of the detail in such a situation.
- Reflectors, flash (to add light to shadowed areas) and diffusers can help to augment the harsh light.
- Lens flares are created by bright light bouncing between the panes of glass in the camera's lens.
 - o Could look like a series of circles
 - o May appear as a haze instead
 - o These help create a feel of heat, happiness, and enjoyment of being in the sun.
 - o Make sure that the flare doesn't cover or detract from the subject.

Low light

- This lighting, usually occurring after sunset often creates the aesthetic of weariness, serenity and calmness.
- Shooting in these conditions can present unique challenges.
 - Less light requires longer exposures, wider apertures, or higher ISO's to get adequate light into the camera.
 - The wider aperture means a shallow depth of field, limiting the range of focus to the immediate foreground.
 - Long shutter speeds create a blur when there is movement in the scene or of the camera.
 - A high ISO will allow easier shutter or aperture settings to be used but will add graininess to the resulting photo.
 - Camera tech is steadily improving, making these factors less worrisome.
 - Raw files are the best option for shooting in low light as they provide more info for editing and will not use incorrect exposure settings.

Artificial Light

- Man made light can offer very different effects
 - Campfires burn, oil burning lamps and candles burn with an orange glow.
 - Tradition, tungsten filament bulbs create a yellow light.
 - Fluorescent light bulbs emit a blue green colored light.
- With each light having a different color, the colors in the environment that they shine on will be effected.
- Of course white balance is capable of adjusting for the color of the ambient light but perhaps that light actually improves the photo and the feel of the environment.