

LEBANON CAMERA CLUB

Holiday Photography

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Holiday Photography

Motivation

- Lots of opportunities for photography on the holidays
 - ◆ Especially Thanksgiving, Christmas, and New Year
- Conditions can be tricky
 - ◆ Impromptu snapshots lead to composition mistakes
 - ◆ Indoor lighting can be dim, but light sources can be bright
 - Exposure is challenging
 - Christmas lights get overexposed very easily
 - ◆ Lots of light sources → difficult white balance
 - Proper white balance = colors are correct
 - ◆ Cell phone automatic modes may struggle in complex cases
 - Most people rely on fully automatic operation
 - There are benefits to using manual controls

Holiday Photography

Composition

- Arrangement of elements in a scene
 - ◆ Elements
 - Line → visual path that enables the eye to move within the piece
 - Shape → areas defined by edges within the piece
 - Color → hues with their various values and intensities
 - Texture → surface qualities which translate into tactile illusions
 - Value → shading used to emphasize form
 - Form → 3-D length, width, or depth
 - Space → space taken up by (positive) or in between (negative) objects
 - ◆ Does it reinforce the subject matter or theme?
- Topics
 - ◆ Common mistakes
 - ◆ Guidelines for better composition

Holiday Photography

Composition

- Common mistakes
 - Poorly placed background object

Note: Photographers often place their full attention on the subject → try to get in the habit of checking the background for distracting elements.



Holiday Photography

Composition

Note: It is common to want to get in close to your subject → take note of the edges of the frame, and if possible take another shot after taking a step or two back

- Common mistakes
 - ◆ Poorly placed background object
 - ◆ Cutting off the subject



Holiday Photography

Composition

- Common mistakes
 - ◆ Poorly placed background object
 - ◆ Cutting off the subject
 - ◆ Subject too small

Note: Not too much of an issue for indoor holiday photography, but think about the subject of the photo and make sure it is prominent.



Holiday Photography

Composition

Note: There can be lots of distractions in holiday shots due to decorations → if you want to reduce their prominence try using a lower f -stop to blur them.

- Common mistakes
 - ◆ Poorly placed background object
 - ◆ Cutting off the subject
 - ◆ Subject too small
 - ◆ Distracting background



Holiday Photography

Composition

Note: Your subject may 'disappear' if it is too similar to the background → decreasing the brightness of the background can help to emphasize the subject.

- Common mistakes
 - ◆ Poorly placed background object
 - ◆ Cutting off the subject
 - ◆ Subject too small
 - ◆ Distracting background
 - ◆ Color/brightness too similar



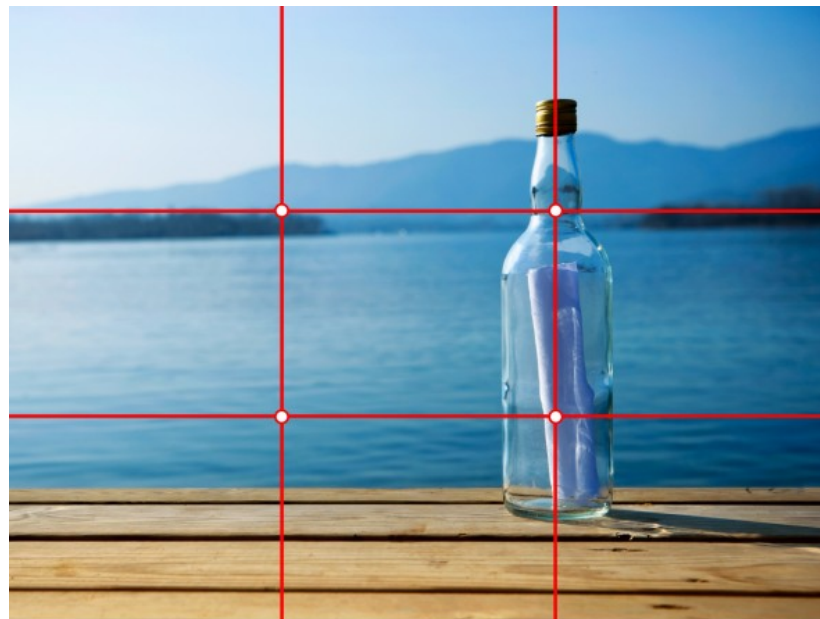
Holiday Photography

Composition

- Guidelines

- ♦ Rule of Thirds → place subject(s) 1/3 from the edge of the frame

Note: Placing a person on the 1/3 line may not work in a portrait. However, it might be possible to balance the composition with a background object like a Christmas tree.



red lines are 1/3 from the edge, places where lines meet are called 'power points'

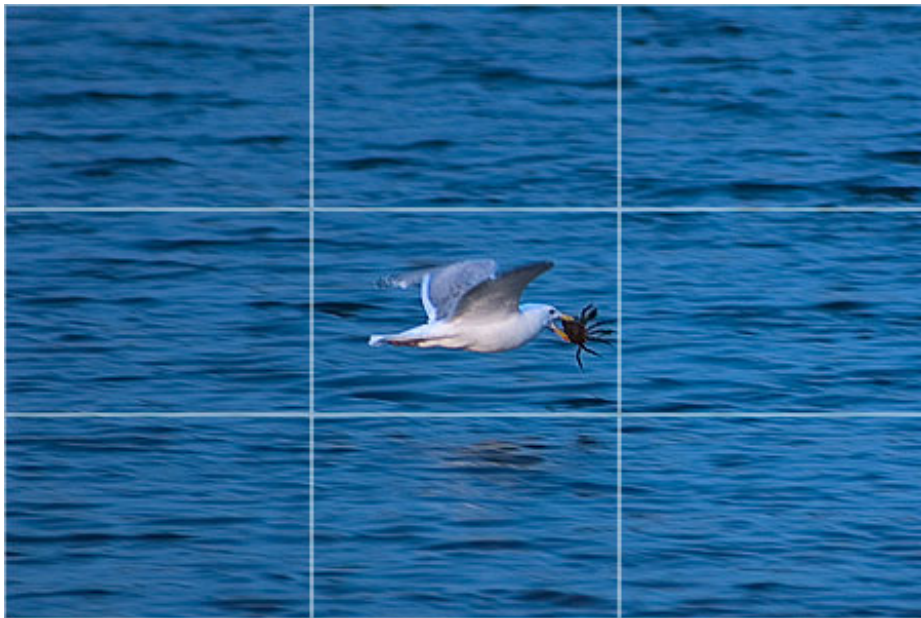
Holiday Photography

Composition

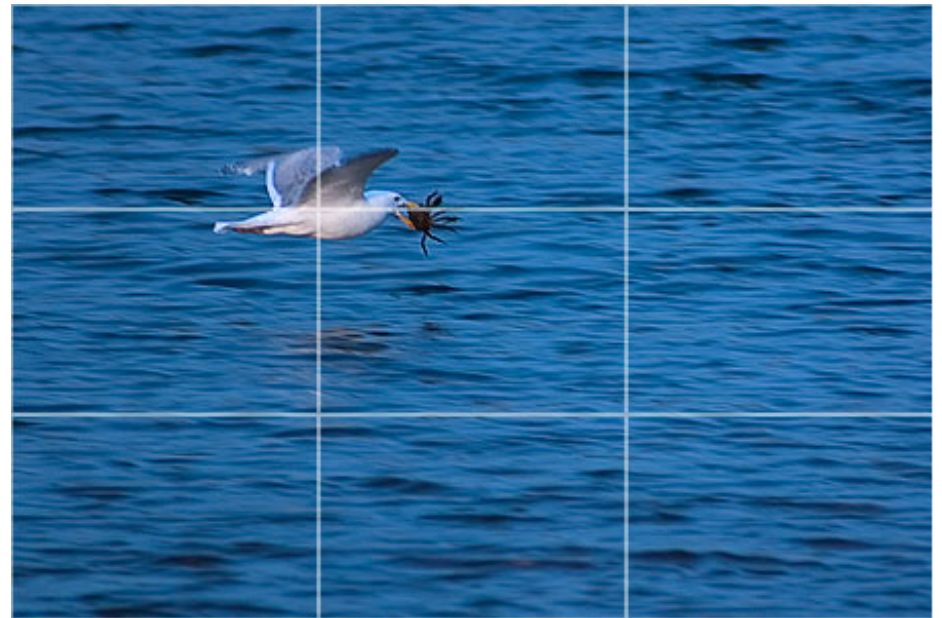
- Guidelines

- ♦ Rule of Thirds → place objects 1/3 from the edge of the frame

Note: It is common to center the subject in the frame, but the composition can be more dynamic when the Rule of Thirds is used.



centered composition



bird on power point adds visual interest

Holiday Photography

Composition

Note: Lead room is very important for moving subjects, but it is also important for subjects that are looking or facing the edge of the image.

- Guidelines

- ◆ Rule of Thirds → place objects 1/3 from the edge of the frame
- ◆ Lead room → extra space in direction the subject is looking/moving



subject seems to be running out of the frame



lead room gives subject room to move/look

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Composition

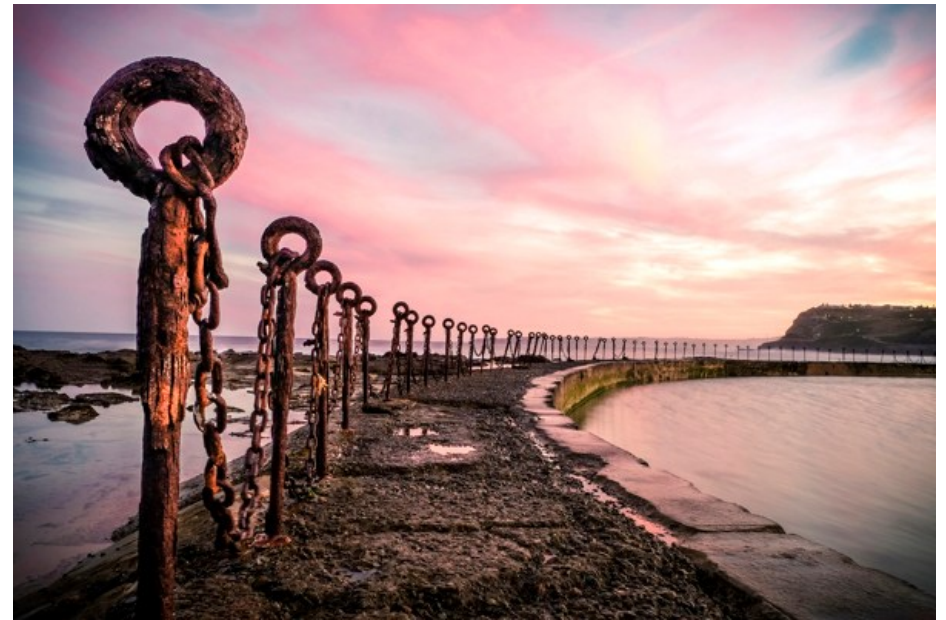
Note: Leading lines control how the viewer's eye moves through the image, essentially 'narrating' the visual journey through the photograph.

- Guidelines

- ◆ Rule of Thirds → place objects 1/3 from the edge of the frame
- ◆ Lead room → extra space in direction the subject is looking/moving
- ◆ Leading lines → lines (or groups of objects) that guide the eye



road lines guide your eye through the image



many identical objects can form leading lines

Holiday Photography

Exposure

Note: Cell phone cameras tend to expose for the shadows, which can lead to highlights being 'blown out' (pure white with no texture, very common with white clouds).

- Goal: capture the proper amount of light
 - ◆ Dark areas should be dark but not underexposed
 - ◆ Bright areas should be bright but not overexposed
 - May not be possible when light sources are in the frame
 - **Overexposure is worse because it cannot be fixed in an image editor**



underexposed (land too dark)



overexposed (clouds too bright)

Holiday Photography

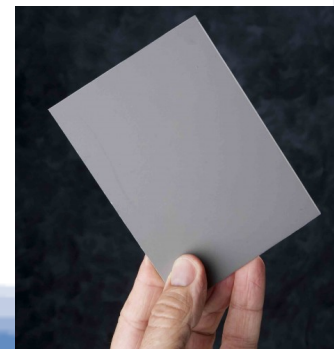
Exposure

Note: Cell phone cameras tend to expose for the shadows, which can lead to highlights being 'blown out' (pure white with no texture, very common with white clouds).

- **Goal: capture the proper amount of light**
 - ◆ Dark areas should be dark but not underexposed
 - ◆ Bright areas should be bright but not overexposed
 - May not be possible when light sources are in the frame
 - **Overexposure is worse because it cannot be fixed in an image editor**
- **Metering**
 - ◆ The way the camera measures the light in the scene
 - ◆ Cameras meter in 'reflective' mode
 - Measure light reflecting off objects in the scene
 - Meters 'expect' an 18% gray reflectance to calculate light in scene

Note: 18% gray is also known as 'middle gray', and many image elements are close to middle gray → grass, green leaves, and a saturated blue sky. Indoor white walls are much brighter, and metering on them will result in a dark image.

gray card



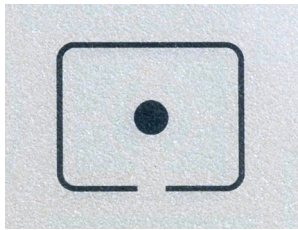
Holiday Photography

Exposure

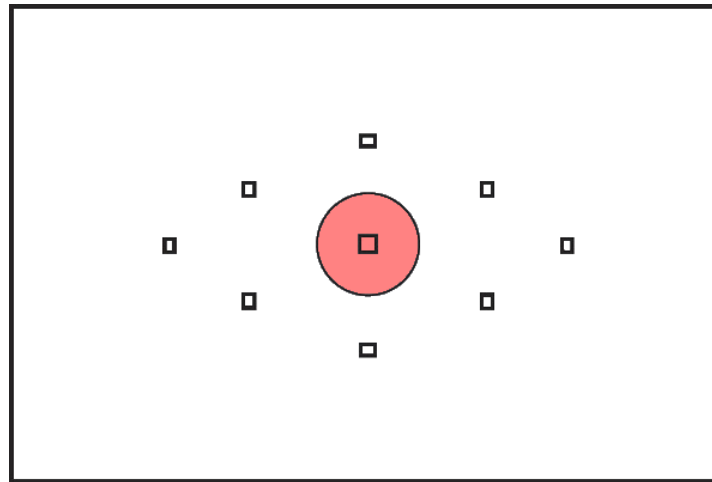
Note: DSLR cameras have a separate metering sensor, while mirrorless cameras (and cell phones) meter off the main sensor.

- Metering

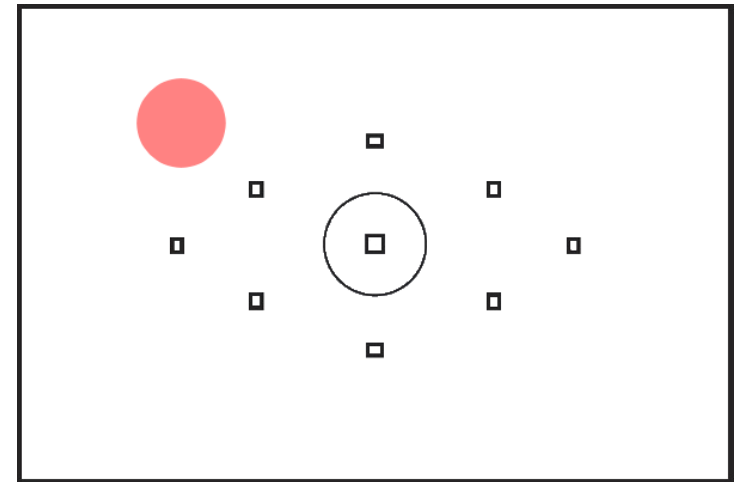
- ◆ The way the camera measures the light in the scene
- ◆ Modes
 - Spot → light is measured in a small area (may be moveable)



spot metering symbol (may look different on some cameras)



fixed spot in center of frame



flexible spot → may be restricted to certain points (DSLR) or moved to any location in the frame (mirrorless)

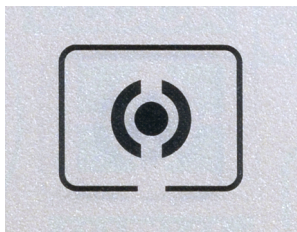
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Exposure

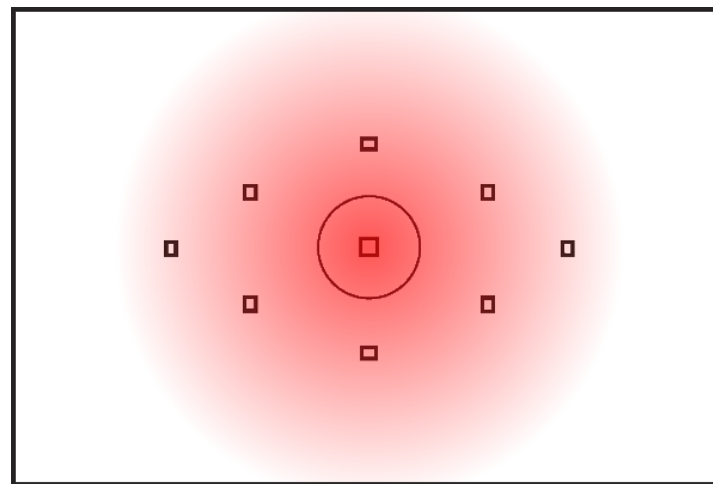
Note: The main subject is often placed in the center of the frame, so center weighted metering can make sense (assuming the subject is close to middle gray).

- **Metering**

- ◆ The way the camera measures the light in the scene
- ◆ Modes
 - Spot → light is measured in a small area (may be moveable)
 - Center weighted → a larger area centered in the frame is used



center weighted
metering symbol
(may look different
on some cameras)



center weighted zone gets
more weight when metering

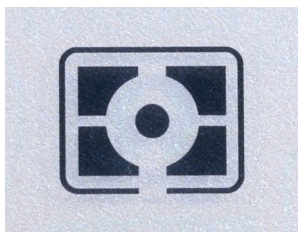
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Exposure

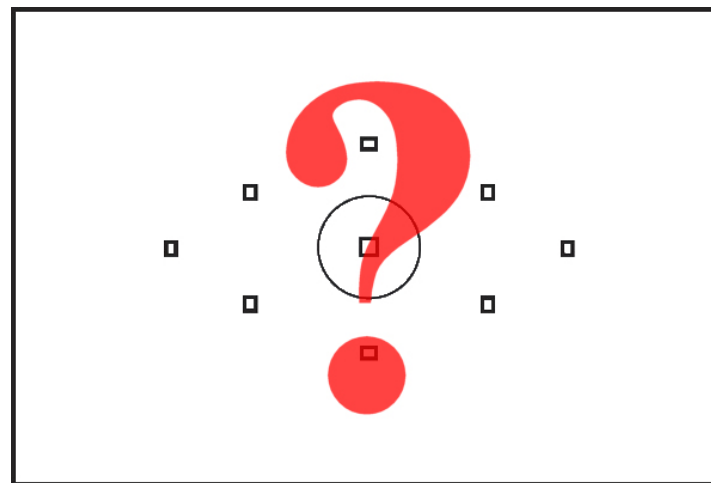
Note: Matrix metering is also known as Evaluative, Segment, ESP, or Multi-Pattern → each manufacturer has a different name for it.

- Metering

- ◆ The way the camera measures the light in the scene
- ◆ Modes
 - Spot → light is measured in a small area (may be moveable)
 - Center weighted → a larger area centered in the frame is used
 - Matrix → the entire frame is evaluated, using an algorithm



matrix metering
symbol (may look
different on some
cameras)



matrix metering algorithms are
a trade secret

Holiday Photography

Note: If a cell phone has a fixed metering mode it is probably using matrix metering.

Exposure

- Metering

- ◆ The way the camera measures the light in the scene

- ◆ Modes

- Spot → light is measured in a small area (may be moveable)

- Center weighted → a larger area centered in the frame is used

- Matrix → the entire frame is evaluated, using an algorithm

- ◆ Changing modes

- DSLR & mirrorless camera → menu option

- Cell phone → may not be an option, or available in manual settings

Holiday Photography

Exposure

Note: Exposure compensation is set in 'stops', where one stop is twice (+) or half (-) the amount of exposure → most digital cameras can adjust in 1/3 stop increments.

- **Exposure compensation (EC)**
 - ◆ **Manually adjusting the exposure**
 - Used to obtain proper exposure when the metering is inaccurate
 - Photographer sets a + amount (increase) or – amount (decrease) offset
 - ◆ **Many photographers use EC to avoid overexposing highlights**
 - I generally shoot with -0.7 stop EC (1/3 stop = 0.3, 2/3 stop = 0.7)
 - Cell phone users may use -1 to -1.3 stops EC to prevent overexposure
 - ◆ **How to set**
 - DSLR or mirrorless camera → may be a dedicated knob
 - DSLR or mirrorless camera → may be set by button + control wheel
 - DSLR or mirrorless camera → may be a menu item
 - Cell phone → in manual settings mode (on my cell phone)

Holiday Photography

Exposure

Note: A Christmas tree is fairly well lit on its own. If a person is close to the tree then an on-camera light or flash can wash out the tree.

- **Relative illumination (subject vs. background distance)**
 - ◆ **Light intensity changes based on distance → Inv. Square Law**
 - Falls off as the square of the distance → 2x farther = $\frac{1}{4}$ of the light
 - Move light closer to subject → larger relative distance to background
 - Or, move light and subject away from background

Example: wall is 4 ft behind subject, subject is 4ft from light → wall is 8 ft from light, so $\frac{1}{4}$ of the light on wall



Example: wall is 4 ft behind subject, subject is 10 ft from light → wall is 14 ft from light, so $\sim\frac{1}{2}$ of the light on wall

© creativelive.com

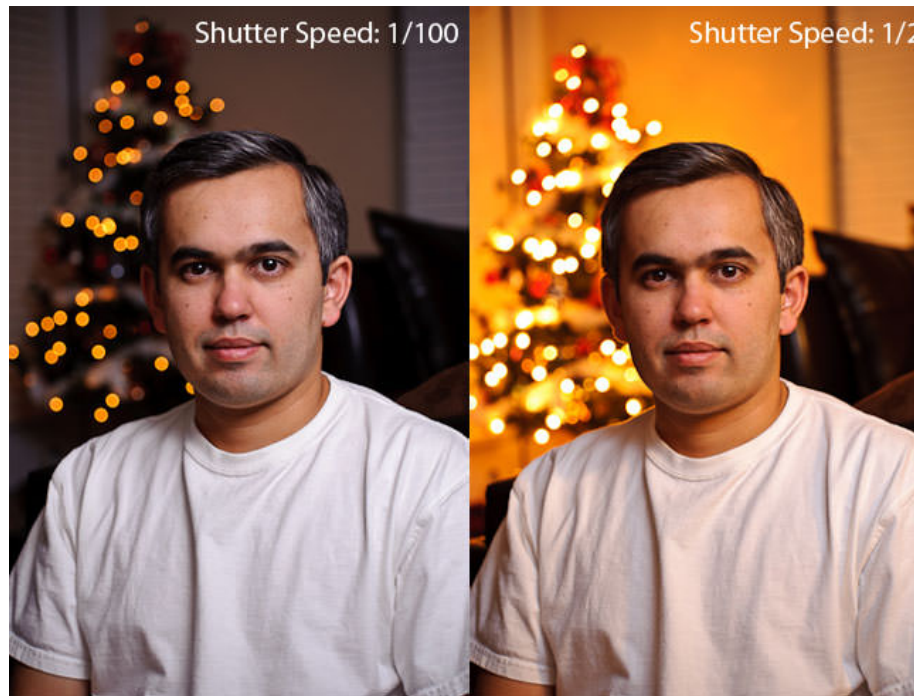
light closer to subject → relative distance to wall is larger so wall is darker

light farther away → not as much relative distance so background is lighter

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Exposure

- Relative illumination (shutter speed)
 - ◆ Shutter speed affects lighting
 - Slow shutter speed can increase brightness of background



© photographylife.com

fast shutter speed minimizes background light → requires more subject light

slow shutter speed accumulates background light → requires less subject light

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Exposure

Note: Not all cameras have built-in HDR capability, but it is becoming more common—including on cell phones. It is possible to take the shots yourself and combine them with HDR software.

- High dynamic range (HDR)
 - ◆ Multiple shots taken at different exposures combined
 - Good for high contrast situations → can help with Christmas lights
 - May look artificial at times, depending on how shots are combined



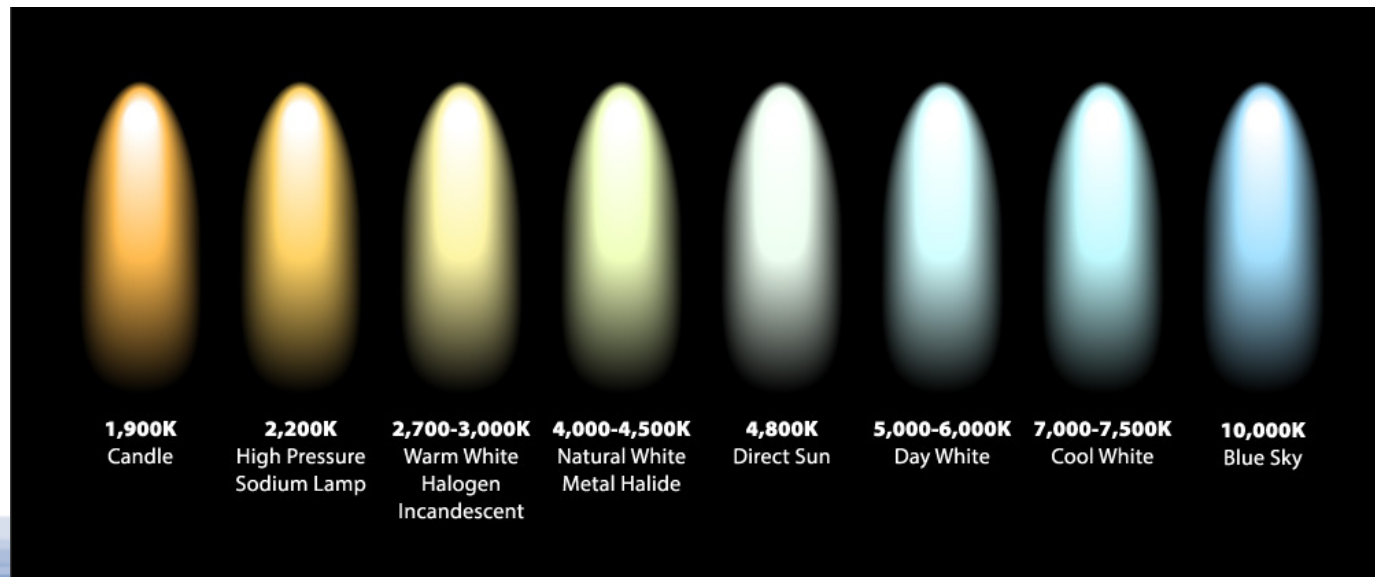
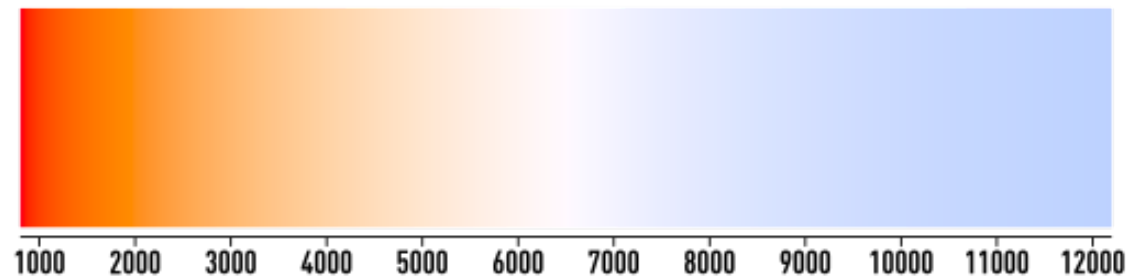
overcooked HDR does not look natural, but can be used as an effect

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White balance

Note: Camera film was sold in 'tungsten' and 'daylight' versions → tungsten for incandescent bulb illumination (indoors) and daylight for outdoor photography

- Color balance appropriate for light source
 - ◆ Light sources have different 'color temperatures'
 - Measured on a red-blue scale in degrees Kelvin



Holiday Photography

White balance

Note: Kelvin WB → enter the Kelvin value of the light source.
Custom WB → camera determines the WB by sensing the light reflected from a gray card (or white paper).

- Color balance appropriate for light source
 - ◆ Light sources have different 'color temperatures'
 - Measured on a red-blue scale in degrees Kelvin
 - Color temperature affects how the camera renders colors



the correct white balance setting is daylight, and we can see the effects of using the wrong white balance setting in the camera (however, it is possible to use the 'wrong' white balance as an effect)

auto Kelvin custom



AWB

K

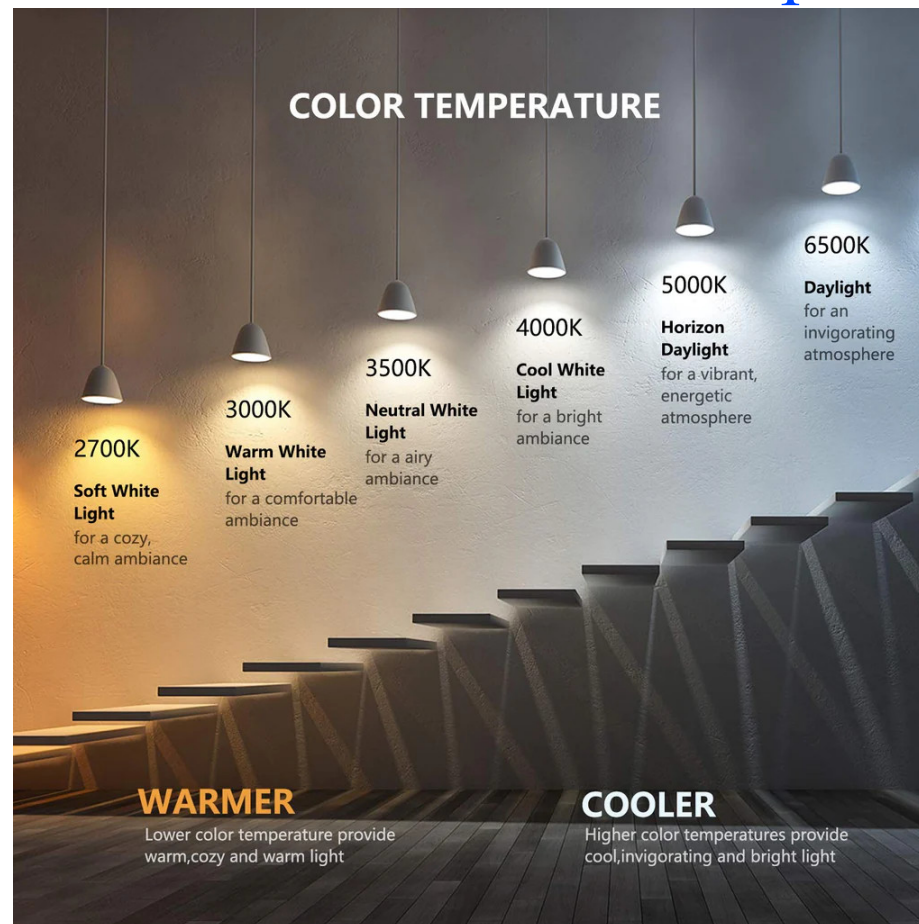


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White balance

Note: Cell phone white balance can be selected in manual mode (if available).

- Indoor white balance
 - ◆ May be mixed → choose the closest option for main subject



living room/bedroom

kitchen/bathroom

home office

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White balance

- Indoor white balance
 - ◆ May be mixed → have to choose the closest option
 - ◆ Christmas lights, candles, etc. may affect auto white balance

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White balance

Note: Not all cell phones have a flash option, but it is becoming more common. Cell phone flash cannot be bounced, but it might be able to trigger another flash.

• Indoor white balance

- ◆ May be mixed → have to choose the closest option
- ◆ Christmas lights, candles, etc. may affect auto white balance
- ◆ Flash can dominate the lighting, making white balance easier
 - Some people find flash to be 'too artificial', and prone to 'red eye'
 - Bouncing the flash off the ceiling can make it look more natural



note the brighter background because the relative distances are more similar → light is bouncing off the ceiling to subject and wall

© Neil van Niekerk

direct flash → harsh, creates shadow

bounce flash → softer, no shadow, no red eye

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Cell phone

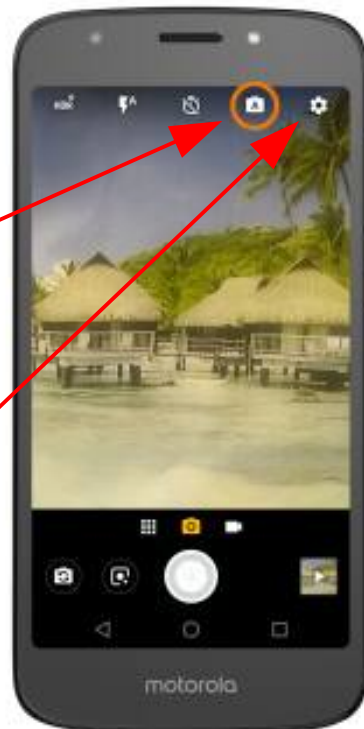
Note: These are instructions for my Motorola E5 Android cell phone (introduced in 2018). Cell phones may be very different in their features and operation.

- **Manual mode**

- ◆ **Menu item in camera mode can change to manual mode**

A = automatic mode → camera controls all settings

gear symbol = settings → set up various camera parameters



pressing on the A symbol opens a menu where you can select M = manual mode

Holiday Photography

Cell phone

- **Manual mode**

- ◆ **Menu item in camera mode can change to manual mode**
- ◆ **Settings**

Note: ISO represents the sensor's sensitivity to light, also used for photographic film (used to be called ASA). ISO 200 is twice as sensitive to light as ISO 100. Higher sensitivity produces more noise.

- focus →
- white balance →
- shutter speed →
- ISO →
- exposure compensation →



Note: Manual settings may be lost when you close the camera app. There may be an option to make changes permanent in the Settings area of the app.

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Exposure

- Exposure triangle

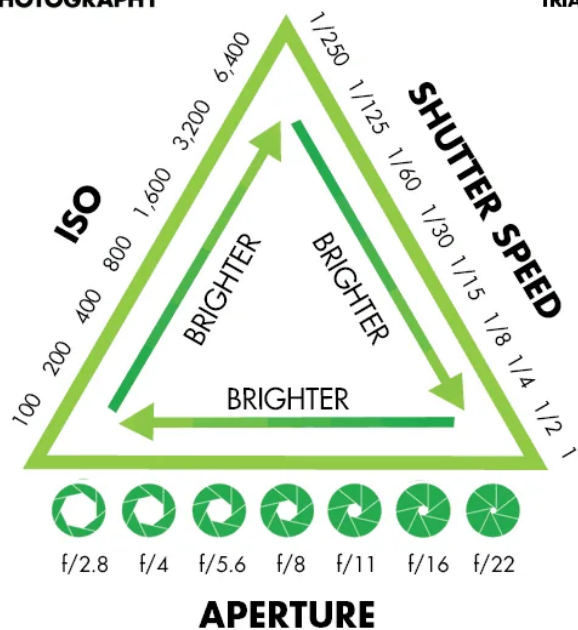
- ◆ Variables → ISO, aperture, shutter speed

- Exposure determined by selecting a value for each parameter

Note: Cell phones usually have a fixed aperture unless they have multiple lenses, which is why there is no aperture setting in manual mode.

EXPERT PHOTOGRAPHY

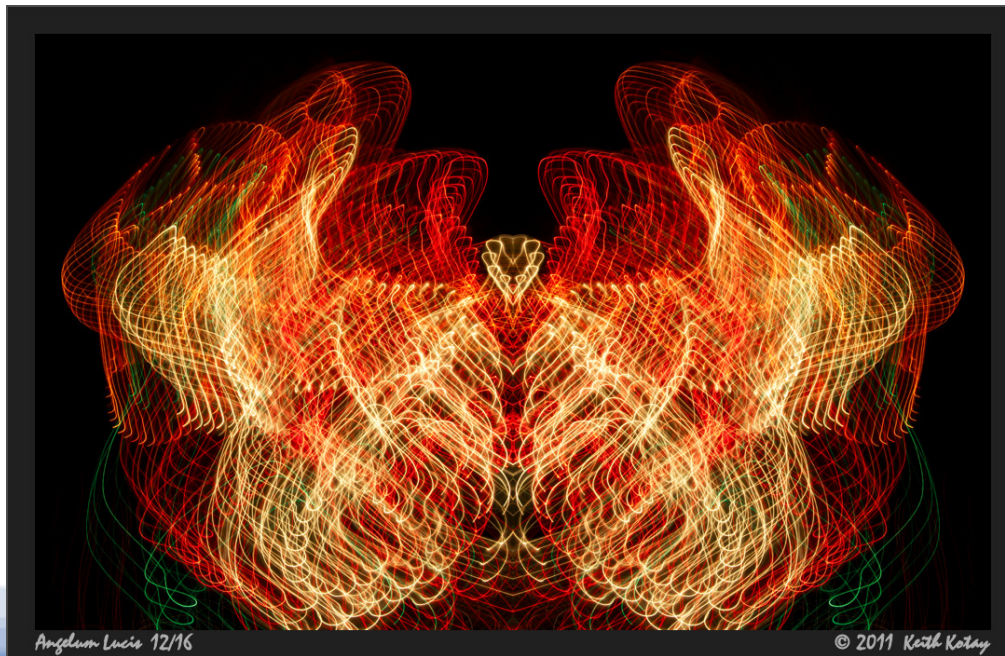
EXPOSURE TRIANGLE



Many combinations of variables can produce the same exposure, but each variable has its own effect on the recorded image

Exposure Parameters	More Noise	Less DOF	More Motion
More Exposure Value	Higher ISO	(smaller <i>f</i> -number) Bigger Aperture	Longer Shutter Speed
Less Exposure Value	Lower ISO	Smaller Aperture (bigger <i>f</i> -number)	Shorter Shutter Speed
	Less Noise	More DOF	Less Motion

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