Contrasting Colors Light Patterns Portraits

Light Writing and Amazing Things in the Studio

Bellwork

For Bellwork, you needed to watch this video and then summarize what's important about it in three full/complete sentences.

Talk briefly about what you got from this video to your neighbor and be prepared to share with the class.



Objective

Students will be able to:

- Use contrasting colors and formal light patterns(*Rembrandt, Split, Loop, and Butterfly*) in portrait photography to create dramatic and visually striking effects.
- Learn more advanced formal light patterns in portrait photography.
- Explore using opposite colors on the color wheel to enhance mood and depth in their portraits.

The Color Wheel

The color wheel is a circular diagram that shows the relationships between colors, helping artists and photographers understand how colors interact.

It's divided into **primary colors**(*red*, *blue*, *yellow*), **secondary colors**(*green*, *orange*, *purple*), and **tertiary colors**(*mixes of primary and secondary*).

Warm colors, like *red*, *orange*, and *yellow*, evoke feelings of energy, warmth, and excitement, often drawing attention in an image.

Cool colors, like *blue*, *green*, and *purple*, create a sense of calm, relaxation, or mystery.

Understanding the contrast between warm and cool colors helps photographers create mood, balance, and emphasis in their work by choosing colors that complement or contrast each other.



REFRESHER - Catchlight

Catchlights are the small reflections of light in a subject's eyes, and they are essential in portrait photography because they bring life and energy to the image.

Without catchlights, the eyes can look *dull* or *lifeless*, making the portrait feel *flat* or *uninviting*.

Catchlights help draw attention to the subject's eyes, which are often the focal point of a portrait, and they add *depth* and *dimension* to the face.

They also give viewers a sense of where the light source is, which can subtly enhance the mood of the photograph.

Simply put, catchlights make portraits more engaging and visually appealing.



Student Photo Examples

The photo examples you will see in this lesson are from Photo I students from four years ago(*when Sam, Mateo, Ari, and Makayla were freshmen!*), so they are close to what you should be aiming for, but you all are more experienced than Photo I students, so the photos you create for this upcoming assignment should be on a higher scale than the ones you see in here. These were also the base idea of the assignment, whereas the assignment has evolved from four years ago! The hope is that photos from this year can replace the photos in this presentation.

Refresher - BUTTERFLY

Butterfly lighting is aptly named for the butterfly shaped shadow that is created under the nose by placing the main light source above and directly behind the camera.

The photographer is basically shooting underneath the light source for this pattern.

It is most often used for glamour style shots and to create shadows under the cheeks and chin.

It is also flattering for older subjects as it emphasizes wrinkles less than side lighting.



Butterfly | Student Example



Butterfly | Student Example



Refresher - LOOP

Loop lighting is created by placing your light slightly above eye level of the subject and 45 degrees off axis(give or take). This shifts the nose shadow to one side of the face. Instead of a butterfly-ish shadow, you'll end up with a small loop.

The quickest way to loop lighting is to start with butterfly lighting but then shift the position of your light a little off to the side. Whatever side your light is on, a nose shadow will appear on the opposite side.

When shooting subjects outdoors with natural light, you can turn your subjects until loop lighting is achieved.



Loop | Student Examples



Loop | Student Examples



Refresher - REMBRANDT

Rembrandt lighting is named because of the Dutch painter Rembrandt, who often used this pattern of lighting in his paintings.

Rembrandt lighting is identified by the triangle of light on the cheek.

Unlike loop lighting where the shadow of the nose and cheek do not touch, in Rembrandt lighting they do meet which creates that trapped little triangle of light in the middle.



Rembrandt | Student Examples



Rembrandt | Student Examples



Refresher - SPLIT

Split lighting(*Also called side lighting*) is a form of lighting where half of the subject's face is lit, while the other half is left in shadow. It creates a dramatic, unique feel and is not as common as other positions.

Split lighting is very easy to achieve: place your light to the side of your model. If leaving half the face in darkness is too dramatic, add a reflector or white foam board to bounce a little light onto that side.

This shot combines both split and short lighting to dramatize and to thin.



Split | Student Examples



New Light Patterns!

Profile/Rim Lighting

NEW - Profile/Rim

Profile lighting(*Also called rim lighting*) is sometimes used in sports portraiture because it has a heroic look.

There are 2 common applications of this lighting type: For the first one, position your light behind your subject, giving them definition and separation from the background.

Your subject will be mostly underexposed.

This method requires more than one light if you don't just want an outline(*silhouette*).



NEW - Profile/Rim

For a side portrait situation, have your subject positioned at 90 degrees so that you only see their profile.

Place the light in front of their face(at a reasonable distance and just above eye level to start) or even just very slightly behind the side of the face that's away from the camera.

The idea is to light only the edge of their profile.



NEW - Profile/Rim | How To

From left to right

- Single light from behind creates an outline effect.
- Fill with a second light as desired.
- Behind the scenes look at this setup.
- Example of profile lighting.



Profile | Internet Examples



Broad Lighting

NEW - Broad

Broad lighting is a technique that can often be combined with one of the lighting patterns talked about before to solve specific problems.

Broad lighting is a great choice for glasses.

It doesn't tend to cause reflections.

To achieve it, light the part of the face closest to the camera(even if it's only slightly closer).



NEW - Broad

Position the subject so that the part of their face that's receiving the most light is also the part that's closest to the camera.

This means your subject needs to be sitting at a slight angle from you.

It's very useful for subject's wearing glasses, as broad lighting is the quickest way to light someone while keeping their glasses outside the angle of reflection.

Broad lighting is common for school portraits and corporate headshots for this reason.

However, it also can make a face look wider than usual.

Broad lighting is really shooting from the same side as the key light.



Broad | Internet Examples



Short/Narrow Lighting

NEW - Short/Narrow

Short lighting is the opposite of broad lighting.

In short lighting, the part of the face that is most illuminated is also the part furthest from the camera.

Your subject is still at an angle relative to the camera, but the light is now on the far side of the face.

Short lighting can sometimes cause reflection in glasses depending on the exact angle.

It can be the trickier of the two positions.

To achieve it, light the part of the face farthest from the camera*(even if it's only slightly farther)*.



NEW - Short(Thinning)

Depending exactly on the angle used, short lighting is good at creating definition in the face.

While certainly not impossible, avoiding glare from glasses with short lighting is challenging.

Short lighting can *thin* a face out - which is both good and bad depending on the look you are going for.

Short lighting is really shooting away from the same side as the key light.

Another way of putting it, is short light is shooting from the shadow side - where the light is short.

It thins your subject.



Short | Internet Examples





Short Lighting: Light hits the side of the face farthest from the camera. Tends to show glare. Broad Lighting: Light hits the side of the face nearest the camera. Tends to hide glare.



Broad

Short

SHORT LIGHTING BROAD LIGHTING

Short and broad lighting are yin/yang techniques that allow you to get two unique setups by rotating your subject 180 degrees.



Fill Lighting

Fill Lighting

You can do a lot with just one light.

However, you should decide whether or not you want to also use a fill light.

Fill lighting doesn't need to come from another light.

Instead of adding a second light source as your fill, you can bounce light off your key light from reflector and use that as your fill.

To use fill lighting effectively, it is helpful to understand the basics of lighting ratios.

The larger the ratio is between two lights, the more pronounced the contrast between light and dark is.

Just understand that you can create dynamic portraits with interesting contrast and depth by having your key light at one level of brightness and your fill lighting at a lower level of brightness.

This can be measured in a couple of ways...

Fill Lighting





Cropping

For portraits, especially for this assignment, you should be aiming for the head and shoulders(*far right*) crop or the head and shoulders(*mid chest level, second to the far right*).





Portraiture Cropping Guide

For This Assignment

You will photographing all seven of the light patterns:

• Butterfly, Loop, Rembrandt, Split, Profile, Broad, and Short.

You will be photographing this in the studio, using two LED lights.

- Key/Main Light Warm Color
 - Held closer to your subject to be the dominant light
- Fill Light Opposite Cool Color to the Warm Color on the Color Wheel
 - Held further away from the subject than the main light, giving enough colored light to fill in the shadows without dominating the main light.
- **Catch Light** Your portraits need to have catchlights in both eyes!

For This Assignment | Continued

- **Colors** There are 12 colors on the color wheel, six colors on each side.
 - Since there are seven photos you need to get, you will need to get six different color combinations and for the Profile light pattern, you can have any color combination as long as the main light is a warm color and the fill light is a cool color.
- Background Separation Your subject needs to be separated from the background.
 - As you saw from some of our photo examples, the subjects (*especially the ones with darker hair*) tended to start to blend into the background.
 - You can utilize what you learned from Rim lighting to have a third light in the majority of your photos behind your subject, either pointing at your subject or at the background. Keep in mind this should not conflict with the main purpose of this assignment: contrasting colors.
- Extra Credit for Photo II / REQUIRED for Photo III Most times portraits are *head and shoulder*, but for this extra credit, should be *head to mid-chest*. This should also be with the subject being better prepared/dressed.
 - Most assignments here are taken with whatever the student wore for the day to school. For this extra credit(*required for Photo III students*) opportunity, more thought needs to be put in before taking photos, for intent on having the photos taken. This doesn't necessarily mean that it needs to be formal wear/etc, but if you have something more fashionable, artistic, etc, that is specially chosen for this assignment, plan for it *BEFORE* the photoshoot.
 - \circ $\,$ Ask Nistas is you have any questions.

Opposites on the Color Wheel

Key/Main Light

Fill Light

Yellow	Violet
/ellow-Orange	Blue-Violet
Orange	Blue
Red-Orange	Blue-Green
Red	Green
Red-Violet	Yellow-Green

(Consult with the color wheel for the true hue of each color, as the hue for the font is just a visual representation but not accurate for the color wheel)

The Lights!

We have different LED lights that you can use for this assignment!

HUE - Changes through the color spectrum.

SATURATION - how intense or vivid a color looks. At 100% saturation, the color is at its brightest and most vibrant. As you lower the saturation toward 0%, the color becomes less vivid and more faded, eventually turning into shades of gray and losing all its color. At 0% saturation, there is no color left—just white, gray, or black, depending on the brightness.

MODE - Switch between the different modes, from effects to color to white light.







Inverse Square Law for Photography

The **Inverse Square Law** in photography explains how light intensity changes as it travels from the source.

It states that the *intensity* of light is inversely proportional to the square of the distance from the light source.

In simple terms, as you move the light source farther away from your subject, the light gets much weaker very quickly.

For example, if you double the distance between the light and your subject, the light will be only one-fourth as bright.

This law is important in photography because it helps you control how light falls on your subject and background, allowing you to create the right exposure and dramatic effects in your shots.



Light Proximity

As explained in the Inverse Square Law, the closer the subject is to the light source, the brighter the light will be on your subject.

The further away the light is, the less light is on your subject.

Your **key/main light**(*warm color*) should be closer to your subject.

Your **fill light**(*cool color*) can be adjusted and be further away from your subject than your main light.

Your potential **third light source**(*rim light*) should be moved however you need it to be bright enough to separate your subject from the background. This can be on a light stand and your subject should block the light source.



Editing | Selective Color

To enhance the colors for your photos, you will need to use the **Selective Color** adjustment layer.

For enhancing the color, just adjust the **BLACK** for each color. Moving it to the right will enhance the **VIBRANCE**, moving it to the left will reduce the **VIBRANCE**.

You can do this for each color(you'd be surprised how some color levels will affect other colors).

Be careful with the **BLACK** color layer, Nistas recommends that you don't go higher than 10% in either direction with the **Blacks**, and even that might be too much.



Editing | Hue/Saturation

To enhance the colors for your photos, you can use the *Hue/Saturation* adjustment layer.

For enhancing the color, click on the drop down menu where it says **Master** and choose the color you want to enhance. Using the slider for **Saturation**, you can either enhance(*to the right*) the color or decrease(*to the left*) *the color*.

Using the slider for **HUE**, you can actually change the color of the specific color you selected to adjust.

You can adjust the *LIGHTNESS* to increase the brightness of the color you are adjusting.

You can do this for each color(you'd be surprised how some color levels will affect other colors).





The Studio!

The photographer will be towards the back of the studio*(by the door to the Annex)*, facing the blue backdrop wall.

The subject will stand (or sit on a stool) in the middle of the studio.

Person #1 and #2 will be holding the lights for the photographer, main and fill lights can switch between Person #1 and #2.

Don't touch the walls!



The Annex!

Since everyone needs to do this in a timely manner, we will also have a pop up backdrop set up in the Annex.

The photographer will be towards the back of the Annex*(by the door to the Studio)*, facing the blue pop up backdrop.

The subject will stand (or sit on a stool) in the middle of the Annex.

Person #1 and #2 will be holding the lights for the photographer, main and fill lights can switch between Person #1 and #2.

Photo III students need to use the Studio!



Canon EOS R & R8 | 85mm Lens

For this assignment, you will be using the mirrorless camera Canon EOS R or R8, with a 85mm lens(great for portraits!).

These camera have **eye detect** auto focus, so all photos should have **SHARP** focus!

These cameras also have **exposure simulator**, which allows you to see in the viewfinder how the photo should look as you take the photo, so you can adjust the camera's *shutter speed/aperture/ISO* to get the best possible photo as you take them.

The Canon EOS R has an **extended grip** and allows you to shoot vertically as easily as you would normally.

The mirrorless cameras use a new **command ring** on the lens(or with an adapter) that you can program to be different settings. For our cameras, it is set to ISO.

Do NOT change the settings on the mirrorless cameras!











Camera Settings Recap

Shutter Speed: No slower than 1/125.

Aperture: This is the one setting you should adjust. Keep the LED lights at their brightest, and adjust your

ISO: Try to keep at **100** to avoid digital noise, start raising up(*only a little!*) if needed.

Focus: Use the **eye detect** autofocus to get sharp focus. The photo will get a 0 if the eyes are not in focus!

Photo Layout Template

Besides turning in the seven individual photos, you will need to download the template shown here and place each photo in the correct category and say what the key/main light's color is and what the opposite color that is the fill light.

Export this as a JPEG.



Studio Procedures

Do not touch the Blue Wall or get too close to it, as well as the other walls.

Remember that there are two classes happening on either side of the studio, so you need to keep the volume low in the studio.

Door into the Annex(*Middle room*) needs to stay open(*Side doors to other classes remain closed*).

• If you need to turn the light off in the Annex to have it be **darker**, that is fine, but keep the door between studio/annex open.

Do not lean against the walls in the studio.

Turning the lights on and off in the studio

To turn off the lights, there is a small pull tab underneath the white sensors on the switch. **Do not push on the white sensors, it is NOT a button.** Pull the latch/tab gently and the light will turn off.

To turn the lights back on, which you will need to do when you are done with the studio, push the latch/tab back in.





Patience and Practice for Lighting Portraits

Portrait photography lighting requires practice.

Find a patient subject/model and shoot until you achieve your desired look.

Remember to only change one thing at a time when practicing so that you don't confuse yourself.

Don't change your model's position and the light's position at the same time - start with one change and take a test shot before changing anything else about your setup.

The more you practice these lighting patterns, the quicker you're on your way to creating stunning and unique portraits of your subjects.

Closure

What do you think is going to be the easiest part of taking light writing photos?

What do you think will be the hardest part, or the part you might struggle with the most, when taking light writing photos?

Discuss with your neighbors and be prepared to share with the class.