



O-CITY PROJECT



Erasmus+

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1. Lesson Content

Lesson 4 Topic Photography

Image composition and characteristics of light in heritage photography

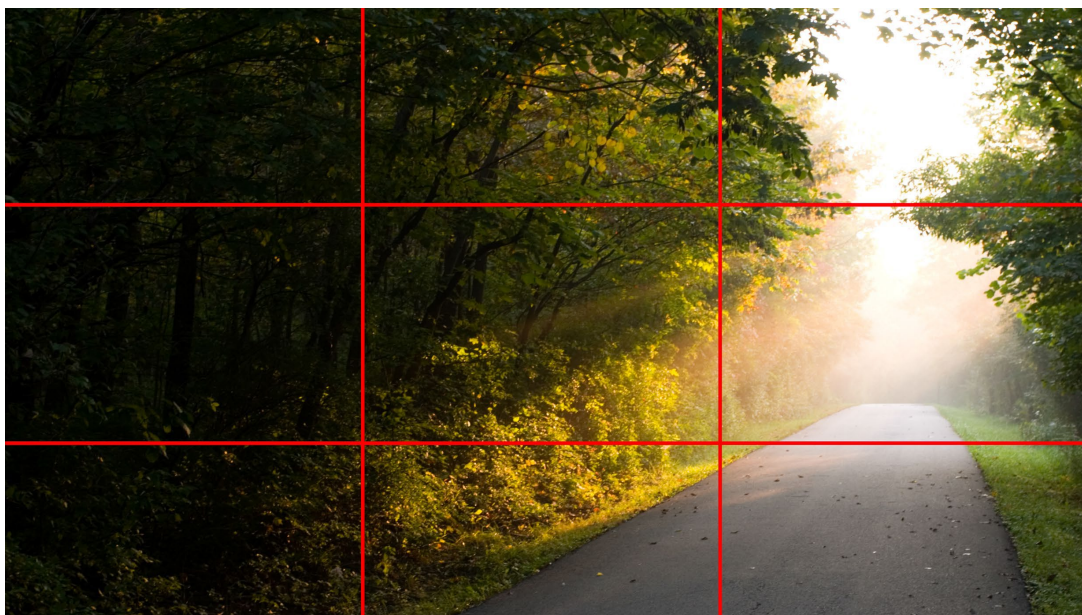
In this lesson, we will learn how to compose and light our photo to improve the message.

About the composition

We will analyze the fundamental rules to know how the elements in the image should be sorted in order to correctly transmit the information of the asset.

What is the rule of the thirds?

The first thing will be to apply the rule of the thirds that will allow us to divide the frame into three vertical parts and three horizontal parts.



Source: Wikimedia Commons.

https://commons.wikimedia.org/wiki/File:Rule_of_thirds_photo.jpg

In this way, we place the elements in the quadrants to give more prominence to some more than others depending on the message we want to convey.

How can I improve my photo with a good image composition?

Avoid placing the elements in the center of the image and use depth of field if we want to selectively focus on a plane.

For example, if we want to blur the background, we must use the greatest possible focal length of the lens, approach the element and open the diaphragm.



Source: Muy Interesante, México.

<https://www.muyinteresante.com.mx/sociedad/aprender-fotografia-nikon-ofrece-cursos-gratuitos-durante-aislamiento/>

If we use a mobile phone, just apply a filter that allows selective focus.

About the lighting

The lighting in the photography of the natural and cultural heritage varies depending on the use of the sun as the main focus of light, so we must know its position all the time. Natural Lighting refers to any light created by the sunlight. The rules of lighting in photography still exist but this time it's more difficult because you can't control light, but the light controls you. Teaching yourselves to find, recognise, create or use light and shadow is essential be able to take powerful images no matter what camera you have in hand.

The best way to improve your natural light shots is practising on your own to find your unique photography style. Shoot under different light, different hours of the

day (try morning, evening, at twilight etc.) and see the results that each angle brings. Check your ISO, your White Balance, the exposure compensation, check all your camera settings as often as you can to see how natural lighting is affecting.

- When you set a high ISO value in your camera, the sensor digitally amplifies the signal of the captured light and, thus, a brighter image is produced. This gives the feeling that the exposition has been increased. On the other hand, when you set a low ISO value, the sensor amplifies the captured signal to a lesser extent, so the resulting image is darker. This gives the impression that the exposition is lower.
- White balance is the photographer's tool to decide what colors he/she wants to appear in the photo and be more creative. The camera (both reflex and mobile phone) will allow us to select the type of light we see (cloudy, sun, shadow, night, flash) in the WB setting.
- Exposure Compensation allows photographers to override exposure settings picked by camera's light meter, in order to darken or brighten images before they are captured.

The white balance allows us to select the final color that we will give the image.

Why is light so important in photography?

In general, we can have images with colder or warmer temperatures according to the object we are portraying. Because of that, light is the main and fundamental element of photography.

The amount of light entering through the diaphragm in a given exposure time will be what allows us to obtain a quality image. Generally, it is better to expose for the highlights than for the shadows. Also, a tip for portrait photography in natural lighting is to make sure that the eyes of your subject are well lit.

You need to understand not only the qualities of light (intensity, direction, quality and color), but also the difference between incident and reflected light. This will allow you to use your equipment to expose correctly and get the most of the different scenes of your video. For example, when shooting outdoors, you should expose in a completely different way if you choose the time of day when the light is less intense (golden hour, blue hour and twilights) or more intense (rest of hours of the day). A good tip is to take advantage of the moments of the day with soft light, that is, the golden hour and the blue hour.

Then, we should distinguish between:

1. Incident light: it is the light received by the object to be photographed. If we work with a photometer external to the camera, we can measure the light that reaches the object in the exact place where we want to take the photograph, so we could configure the diaphragm aperture, speed and ISO for that light it receives.
2. Reflected light is that which is reflected off the object and reaches the camera. This is measured with the camera's own photometer and is less accurate than incident light measurement. However, it is the most common case for amateur or beginner photographers.

Also, you need to understand the four qualities of light:

- Intensity (high or low): the intensity of the light tells us how much light is present in the scene we want to photograph, and it is necessary to identify it correctly if we want our photograph to be well exposed. A high intensity means that there will be a lot of light, on the contrary a low intensity indicates that there is little light. Underexposure occurs when the amount of light is poor, causing a significant loss of information. On the contrary, overexposure reveals that there is an excess of light that we can compensate by reducing the sensitivity, closing the aperture more or increasing the shutter speed.



Nikon D700 | 85mm | f/8 | 1/125s | ISO 200 | 6250K. Image with high intensity of light focused mainly on the face. Credits: © PhotoPills

- Direction (front, side, rear, zenith or nadir): The direction of the light is the angle at which it falls on the subject and determines many of the effects that you can perform with the camera. It is important to note that the address is not usually

unique, but rather the most of the time it is a combination of several different sources.



*Nikon D700 | 85mm | f/8 | 1/80s | ISO 200 | 5500K. Image with frontal lighting. Credits:
© PhotoPills*

- **Quality (hard or soft):** Quality describes the relationship between the size of the source that emits the light and that of the object we are photographing. It depends on whether the shadows appear hard or soft. The first, the hard one, appears when the size of the source that emits the light is small compared to that of the object we are photographing, and generates marked shadows, as well as an intense contrast between the illuminated areas and the shadowed areas. It is interesting to achieve a high level of detail. In contrast, soft light appears when the source that emits the light is large compared to the photographed object, or is reflected off a wide surface. The shadows it gives us are less marked than when we use hard light, so it offers us less detail, but also pleasant colors.



photopills.com
Nikon D700 | 85mm | f/2 | 1/1500s | ISO 200 | 5700K. Hard light image focused on the detail of the branches. Credits: © PhotoPills

- Color (warm or cold): color is not an intrinsic characteristic of objects, but is determined by the way the object interacts with white light and by the way our brain interprets the information it receives. When white light falls on any object, a part of its energy is absorbed, while another part of its wavelength is reflected. It is the latter that determines what color we see it. To accurately identify color we use the concept of color temperature, which indicates the color of the light emitted by a source between red (warm) and blue (cold).



Nikon D300 | 500mm | f/6.7 (escala de ½ paso) | 1/1500s | ISO 200 | 7500K. Image with warm light. Credits: © PhotoPills



Nikon D4s | 24mm | f/11 | 1s | ISO 100 | 7500K. Image with cold light. Credits: © PhotoPills

Which is the best color temperature to use in a photo?

In this way, we compensate for the dominant color and incorporate a colder or warmer shade, as long as necessary. The goal is to find a neutral balance to make the image more attractive and correct imperfections.

There is no specific predominant temperature value, sunrise and sunset offer two different light characteristics, and it will be the heritage element that conditions us to work with one or the other depending on its own characteristics.

Finally:

It is not advisable to use zenithal positions of the sun, since they will condition us to work with white lights that we want to avoid. In this sense, shadows can be useful as they offer some depth and perspective to the image; therefore, we will look for inclined light sources.

Conclusions

The rule of the thirds, the selective focus and the color temperature of a photo allow us to transmit the true essence of heritage reality.