

4-H and Youth



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Recording Proper Outdoor Lighting

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The function of a camera is to record light rays. A digital camera records light rays in an electronic code. When taking pictures outdoors regulating the sun's light influences quality more than any other non-camera factor. There are several methods used to achieve the correct lighting in the outdoors. This sheet will discuss exposure and natural light, while explaining some basic functions that nearly every camera can do to overcome lighting problems.

Exposure

Exposure refers to the amount of light entering the camera. The light rays are reflecting off the surface of the subject and travel through the lens to record the image on the sensor device. Proper exposure is critical to good photography. An over-exposed picture will have very little depth or contrast between the colors and shadows.

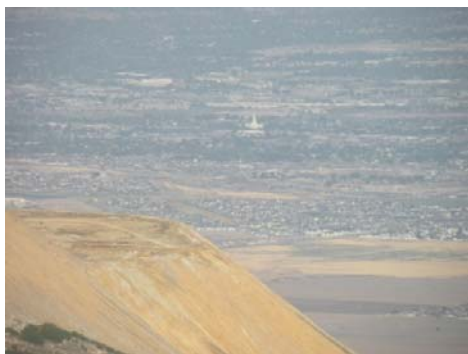


Figure 1. The picture of Salt Lake City was too bright in the afternoon sun.

Sometimes over-exposure of the subject is caused by a background that is significantly darker than the subject. This may cause a washed out subject. Similarly, underexposure of the subject may be caused by a background that is significantly lighter than the subject. This situation will result in a dark subject. The following illustrations demonstrate the need to balance exposure.



Figure 2. Extreme lighting contrast—the slightly underexposed faces are acceptable, not ideal.

Modern digital cameras try to balance out the shadows and lights in order to achieve the correct exposure. When this causes overexposure, the simplest way to deal with the problem is to move the subject in front of a background that is not quite as dark. Some cameras have the ability to tighten the area where exposure is determined. It is important to know your camera in order to overcome over-exposure problems.

Just as too much light in a picture can reduce a photograph's quality, too little light may be just as bad. Problems such as dark photos, blurring and unrecognizable images can occur when there is too little light.

A dark background may cause overexposure of the subject, but light background may cause under-exposure of the subject. A way to lighten the subject without changing the background exposure would be to use a flash. Even if the camera doesn't turn on the flash automatically, a forced flash will lighten the subject without making any change to the background exposure. Otherwise, finding a darker background will help. Another option to consider is that many cameras have the ability to allow the photographer to manually override the shutter speed, and thereby change the exposure of the subject.



Figure 3. The light foreground and background cause this subject to be underexposed.



Figure 4. Due to the dark shadows from the trees there is too little light on their faces.

Correct exposure could be defined as the amount of light energy required to achieve the goal of the photographer. Therefore, in some instances over- or underexposure may actually provide the desired effect.

Natural Light

Natural light is what you deal with when taking outdoor photographs. Different times of day and the amount of cloud cover, or other shade all have an effect on light quality and quantity.

The best quality of natural light for outdoor photography is usually found in the morning and in the evening when the sun is not too bright—colors are more vibrant and shadows are deeper. Depending on the season and the weather conditions this usually is before 10 AM and after 5 PM.



Figure 5. The sunset's rays illuminated this Castle to bring out beautiful colors in the stone.

Taking pictures at this time ensures that the excess reflected light of the sun does not cause the colors of your subject to fade. Filters designed to reduce UV light can also help overcome excess light energy during mid-day shots. In addition, factors such as cloud cover, shade

or other barriers can make lighting conditions ideal or provide aesthetically pleasing effects to the picture.



Figure 6. The light reflected off the canyon walls helps to provide good lighting for the subjects in this photo.



Figure 7. This contrast of the bright sky, lighted background and cloud cover on the subject creates a pleasing effect.



Figure 8. The filtered light at the bottom of the waterfall gives this picture the correct lighting even though it is in the middle of the day.

Another way to compensate for overexposure is to shoot the same subjects at different angles. The sun's rays hit at different angles and sometimes a subject will look very different when the camera is in a different position. The following pictures were taken a few seconds apart but at a different angle.



Figure 9. The picture on the left has too much light making the red heads appear much duller.

When taking pictures of people outdoors do not have them face directly into the sun because that tends to cause people to shade their eyes or squint into the picture. It is just as important to not face the camera directly toward the sun. This can cause unsightly sun glares in the picture.



Figure 10. Be careful to not cause the “sun salute” by having the subjects face into the sun.



Figure 11. If necessary, find a shady spot so the faces look more natural.



Figures 12. The shadows across the faces of this photo are distracting. A flash or something to reflect the sunlight back onto the subject would help reduce this effect.

Conclusion

Lighting is the most important factor in recording quality photographs. If the lighting is wrong under- or overexposure can occur, and/or subjects can blur due to movement. Outdoor photos are typically more vibrant in the early morning or evening when the sun’s rays are not directly shining on the landscape.

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