

# UNDERSTANDING HISTOGRAMS

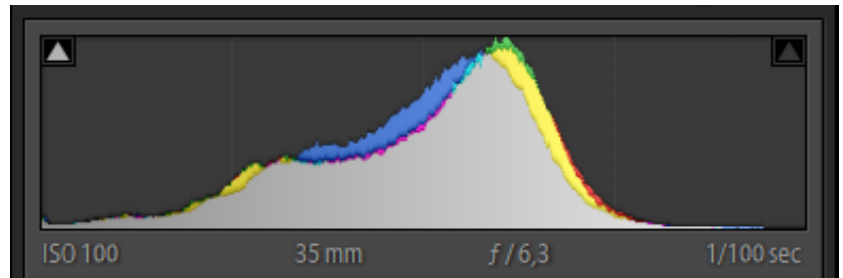
## BLUEPRINT

One of the most useful tools available in digital photography is **histograms**. Every digital camera (even point-and-shoot!) has the ability to display a histogram directly.

A histogram is a graph that represents the tonal values of an image. It shows the amount of tones of particular brightness found in a photo, ranging from black (0% brightness) to white (100% brightness).

These values are arranged across the bottom of the graph from left (darkest) to right (brightest). The vertical axis (the height of points on the graph) shows how many pixels are found at any particular brightness level.

A histogram is quite important because it allows us to quickly evaluate the quality of the exposure our camera is making. This is especially true when the histogram is superimposed on or just next to the photo itself!

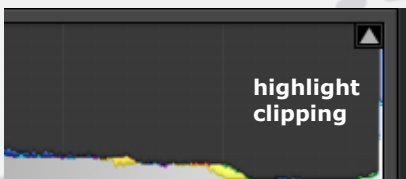


**Dark tones** are on the **left** side of the histogram. As you move **from left to right**, tones get **lighter**. The middle part of the histogram shows **midtone**s, which are **neither dark nor light**. Vertical axis of a histogram displays the amount of pixels for that particular lightness.

Histogram depends on **exposure**, but it is also affected by **tonal range** and other settings.

## 1 SHADOW & HIGHLIGHT CLIPPING

If a certain portion of the histogram is "touching" either edge, it means there's a loss of detail, also called clipping.



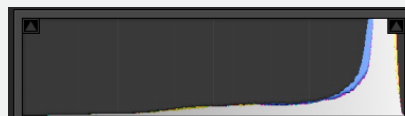
Highlight clipping (areas that are completely white) happens if the graph is touching the right side of histogram. Shadow clipping (areas that are completely black) happens if the graph is touching the left side of histogram.

### TIP:

If you notice any highlight or shadow clipping, alter your exposure accordingly - make your image brighter or darker.

## 2 OVEREXPOSURE

The following image is overexposed (too light). Many tones are very bright and there are no darker tones.



The histogram confirms that the image is too bright - it is shifted strongly to the right.

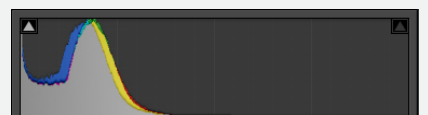
### TIP:

Experiment with the Highlights, Shadows, Whites and Blacks sliders in the basic panel in Lightroom to see if those settings enhance the details in your photo.

## 3 THE ESSENTIALS

## 3 UNDEREXPOSURE

The following image is underexposed (too dark). It lacks any sort of bright detail.



Histogram shows a strong shift to the left side with most tones in the shadow range, and some are even clipped (completely black).

### TIP:

Start with pulling the shadows slider in Lightroom - it will affect the darker areas of an image. To bring out detail, pull this slider to the right.