References for Image Histograms
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The basic histogram
http://www.photoxels.com/tutorial_histogram.html
A simple explanation of the histogram with some clear example images.

Understanding Histograms
http://www.luminous-landscape.com/tutorials/understanding-series/understanding-histograms.shtml
A more comprehensive discussion of the histogram and its importance.

The basic histogram vs. the three color histogram
http://www.kenrockwell.com/tech/histograms.htm
 This page and the link at the end of the page to the three-color histogram describe the difference between the basic histogram and the three color histogram. The article is a few years old so the defects he describes re the basic histogram has been improved somewhat in the past few years. However, it is important to understand what your particular camera is presenting in the histogram. The final take away is that the three-color histogram is the one you want to use if you have it!!!!

This next article is written for videographers, HOWEVER, the discussion on histograms is relevant to us still camera folk. This article does an excellent job of discussing differences between the RGB, luminosity, RGB composite, and RGB overlay histograms.
http://www.scarletuser.com/showthread.php?t=567

There is a technique widely used when shooting in the RAW mode that can minimize the effect of noise in the shadow areas of an image and provide more detail in those shadow areas if post-processed properly. It is called Expose-to-the-Right (ETTR). The next several articles discuss this topic:
http://www.luminous-landscape.com/tutorials/expose-right.shtml

This article introduces the concept and provides a motivation for using a technique called Expose to the right (ETTR). The following article provides some cautionary info.
http://www.luminous-landscape.com/tutorials/right-hista.shtml

A nice discussion of how to restore an ETTR image to the scene as viewed
http://ralphnordstromphotography.com/wordpress/articles/lightroom-tutorial-expose-to-the-right/

Some detailed images and discussion re shadow detail improvement
http://daystarvisions.com/Docs/Tuts/BryanETTR/index.html
http://schewephoto.com/ETTR/index.html

Summary

1 The Histogram depicts the distribution of exposure values in the image under review

2 It is based on an in-camera (IC) JPEG rendering of the image

3 If you shoot JPEG and print with minimal post-processing the histogram is a good representation of exposure

4 ETTR is a valuable method of exposure determination for RAW image files

5 For use with RAW set IC processing to a large color space (Adobe RGB)

6 Set IC mode for low contrast, low saturation; the LCD image may look flat but the histogram is providing you more accurate information about highlight and shadow quality

7 ETTR requires significant post processing effort (see Ralph Nordstrom article)

Histogram Examples

RGB Composite   RGB Overlay