# Basic Color Correction

A histogram illustrates how pixels in an image are distributed by graphing the number of pixels at each color intensity level. The histogram shows whether the image contains enough detail in the shadows, midtones, and highlights to make a good correction.

The histogram also gives a quick picture of the tonal range of the image, or the image key type. A low-key image has detail concentrated in the shadows; a high-key image has detail concentrated in the highlights; and an average-key image has detail concentrated in the midtones. An image with full tonal range has a number of pixels in all areas. Identifying the tonal range helps determine appropriate tonal correction

Step 1: Analyze the Image
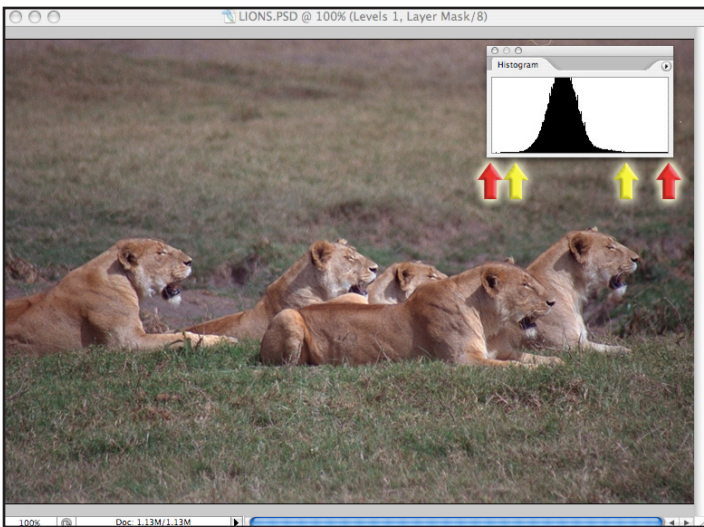
Open the Histogram Palette to see the distribution of luminance values in your image.

This image has its lightest and darkest points (indicated in **YELLOW** arrows) well inside the pure Black and pure White points (indicated in **RED** arrows).

This image lacks contrast since no highlight is a very bright white and no shadows are dark crisp blacks.

From the Layers Palette select a Levels Adjustment Layer.

Step 2: Adjust the Image
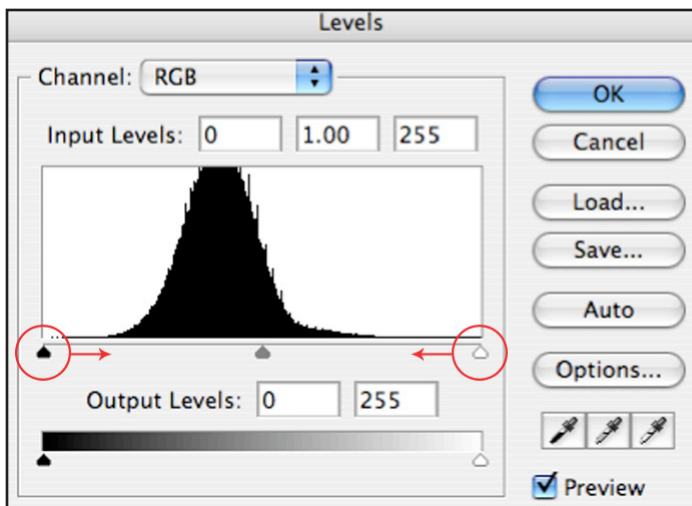
Move the **WHITE** Triangle to the left. This will map the "white point" to what is actually the lightest value in the image.

Be careful **NOT** to move the triangle under the histogram. This will clip the white values, forcing everything to the right of the triangle to be white and blow out the highlights.

Make the same adjustment for the **BLACK** Triangle moving it to the right to darken the shadows.

Last, move the **GRAY** Triangle for overall lightening or darkening of the image.

When an image has a histogram which extends from pure Black to pure White, you can still use a Levels Adjustment to correct the color and improve the image.
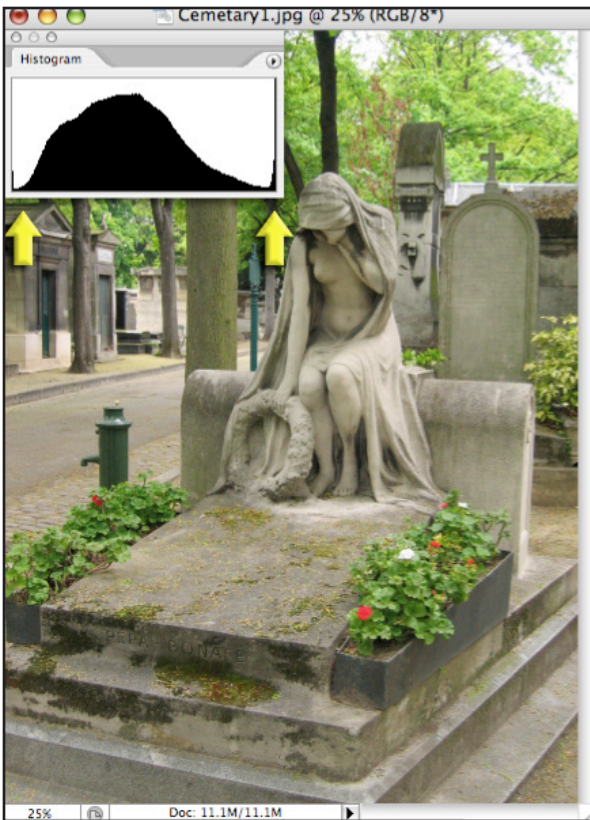

Open the Histogram Palette to see the distribution of luminance values in your image.

This image has its lightest and darkest points (indicated in **YELLOW** arrows) at the pure Black and pure White points. Moving the Triangles would result in clipping the highlight and shadow values without rebalancing the image. Detail would be lost in the highlight and shadow areas of the photograph.

From the Layers Palette select a Levels Adjustment Layer.

Instead of moving the Triangles, the White Point and Black Points can be sampled from the image to reset the overall tonal balance.

First you must determine the lightest and darkest point on your image. If you are not certain where these are, press the Alt/Option key and drag the **WHITE** Triangle all the way to the **LEFT**-- this will force all the pixels to turn white. Whatever is the last to fade out is the Black Point. Drag the triangle back to the right. Repeat the same process for the BLACK Triangle to see the location of the White Point.
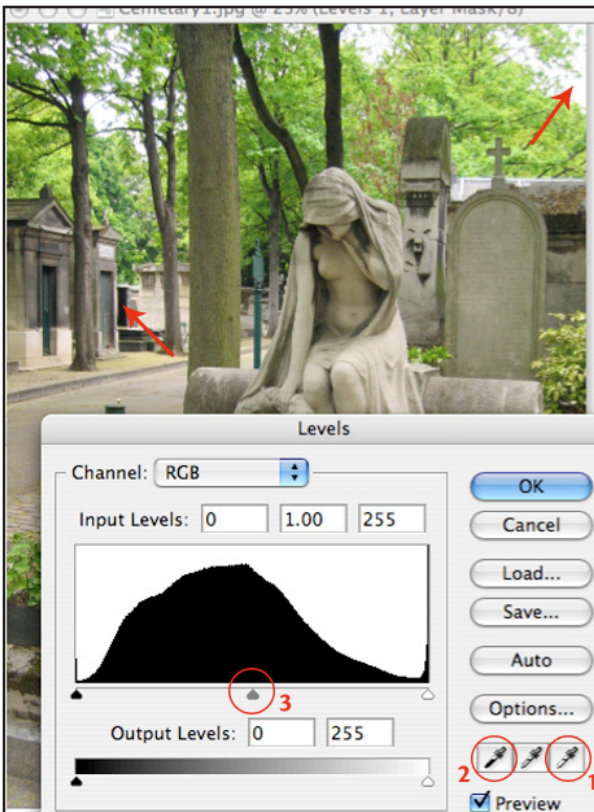
In this image, the **WHITE POINT** is in the sky and the **BLACK POINT** is in the tomb entrance, which are indicated by the red arrows on the image.

Click on the **WHITE EYEDROPPER** (1) and then click on the image on the lightest spot. Then do the same for the **BLACK EYEDROPPER** (2) and then click on the image on the darkest spot.

Last, move the **GRAY** Triangle (3) for overall lightening or darkening of the image.

Note: The **GRAY EYEDROPPER** should only be used to sample a true neutral gray in the image, which will remove a color cast and rebalance the image.