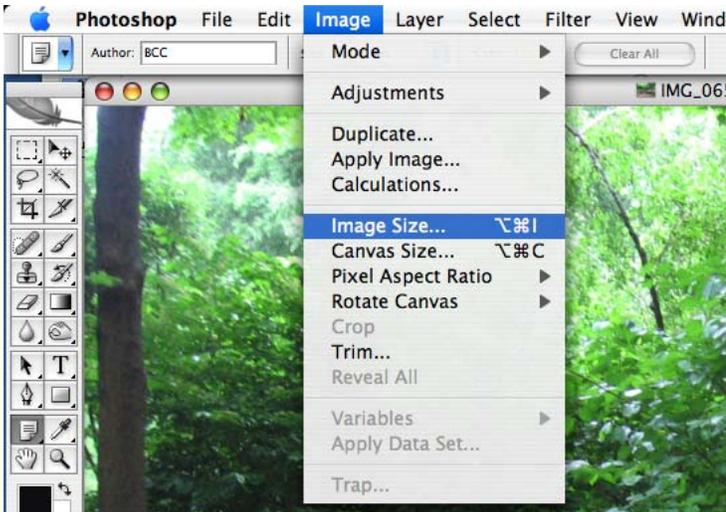Resampling and Resizing Images

Both Resampling and Resizing are done in the Image Size dialogue window. Under Image in the Menu > Image Size
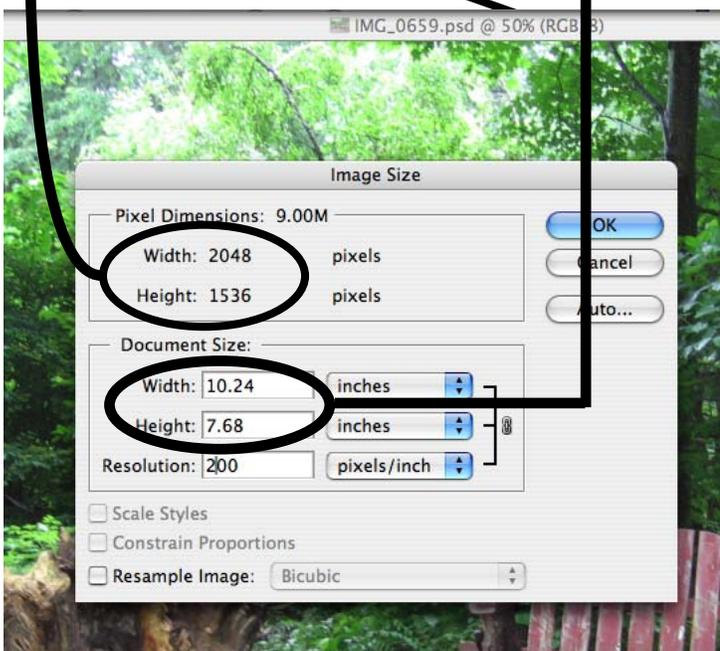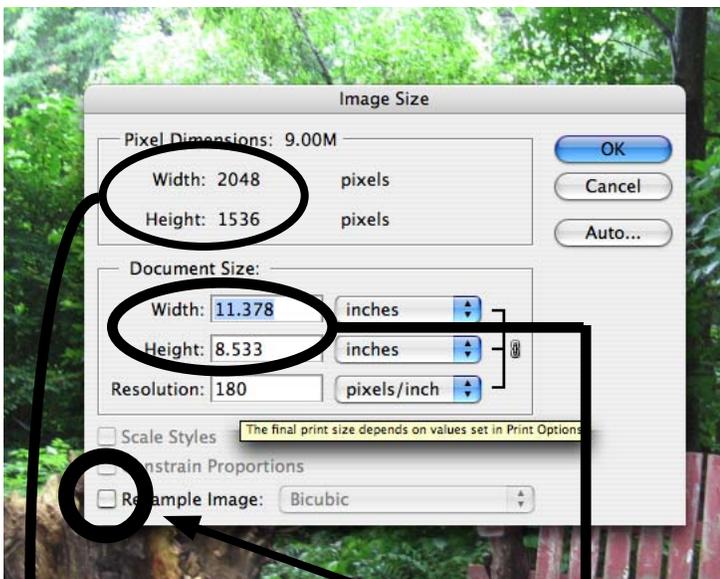
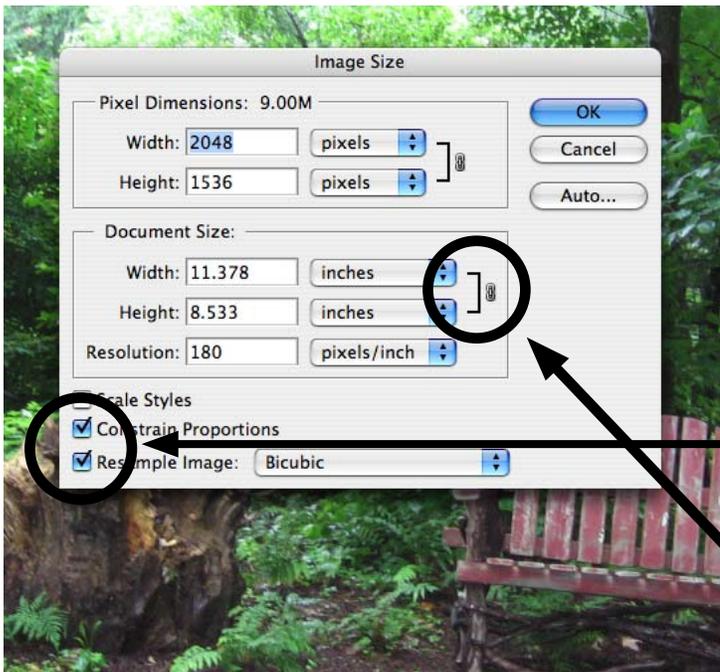Different digital cameras take images at different pixel sizes and resolutions.

When discussing the size of a digital photography there are three things to consider. One, the pixel width and height, two, the resolution (pixels per inch) and three, the final output size, which can be thought of in inches.

When you resize an image, the number of pixels in the file do not change. What changes is the size of the pixels, and therefore the output size of the file. For instance, if you have a file that is 500 pixels wide, at 50 pixels to the inch (ppi), the file will be 10 inches wide. If you have a file 500 pixels wide at 100 ppi, the file will be 5 inches wide. The important thing to remember is that when you resize you do not add or delete pixels and therefore do not degrade the data in the file.

Many digital cameras at their highest quality settings will shoot a very large pixel size file at 72 ppi. A file for output on an inkjet printer should be at approx. 200 ppi. Therefore the maximum printable size of your file will be its size when it is resized to 200 ppi. So the larger the initial pixels size, the larger the final output can be.

To resize a file, use the Image Size dialogue window. Make sure the Resample Image box is click OFF. Type in a new Resolution size based on your desired final output devise. Notice that the pixel width and height do not change, but the Document Size in inches does change.
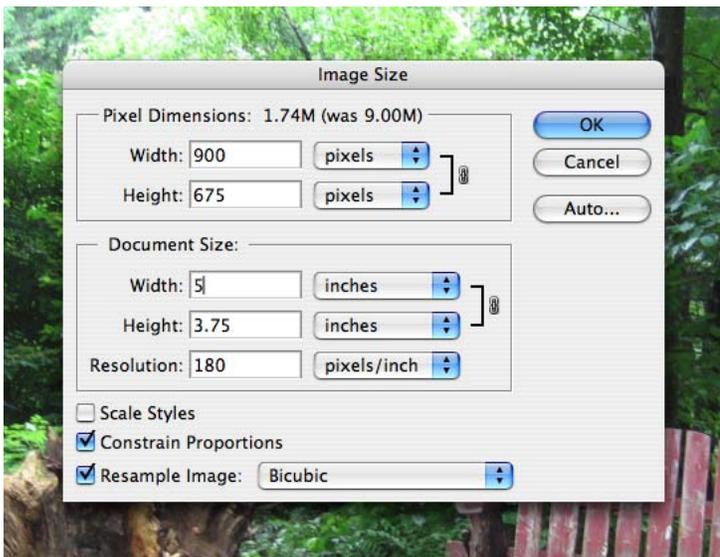
Resampling also changes the final output dimensions. The difference is when you resample, Photoshop adds or deletes pixels to change the dimensions of the file. Even though Photoshop is very good at adding or subtracting pixels, anytime and everytime you resample you degrade your file data. The image will never be quite as sharp and clear as before you resample.

To resample your file, make sure the Resample Image box is clicked ON. Most likely you will also want Constrain Proportions clicked on as well. In the Document Size, Width or Height box type in the new dimension.

Since the Constrain Proportions is clicked on the other dimension will automatically adjust.

Notice when resampling, the number of Pixels change as well as the Document Size. In the example the Resolution was left at 180 ppi. You can change the Resolution if needed.