PHOTO OPTIMIZATION – a primer

Great, you've got the pictures onto the computer. Now what? It all depends on what you want to do with the pictures.

When you've just taken a photograph with a digital camera, that image is at its highest quality. You can't improve the resolution of that picture without re-taking the shot at a higher resolution. Files coming directly from a camera will be at a high resolution and quite large. If you want to make prints of your images, this is a good thing! But if you want to transfer these pictures to the web, they will need to be made smaller, while sacrificing image quality as little as possible. This is done with a technique called optimization.

How to Optimize an image for the web
This tutorial is based on a popular image editing software, Adobe Photoshop. However, the steps and functions are similar to other softwares, such as the Gnu Image Manipulation Program (GIMP), which is included on your CD.

Step 1: Edit your Image
(note: if at any point you make a mistake and wish to undo an action, go to Edit > Undo or simply press Ctrl + Z).

1. Open Adobe Photoshop.
2. Choose File > **Open**. Navigate to your picture folder, and choose the picture(s) you wish to edit. Click Open.
3. If necessary, **rotate your image** so that it is properly oriented. Choose Image > **Rotate Canvas** > 180 degrees, 90 degrees Clockwise or 90 degrees Counterclockwise.

4. Crop your image. Type 'C' or click on the Crop Icon to select the **Crop Tool**.

 The Crop Tool is in the lower left hand corner of the group of 6 buttons on the Tools Bar. If you can't see the Tools Bar, click Window > Tools.

Click and drag your mouse across the image to select the portion to be kept. When you let go of the mouse, the darkened part of the image will be cropped, or cut, from the image. You can adjust the size of the cropped area by clicking and dragging on any of the 8 squares at the sides of the box.
Tip: Don't just crop borders. Think about what could be removed to make a better picture. For instance, if there is a large portion of sky above the subject of your picture, consider cutting it out if

it contributes nothing to the image.
Press Enter to apply the ctop.

5. **Adjust the Brightness and Contrast.**
This is important to make sure your subjects look natural. Select Image > Adjustments > **Brightness/Contrast**. A box with 2 sliders will appear. Drag the sliders to the left or right, keeping a close eye on how this affects the image.

Tip: if you don't see the image changing as you move the sliders, make sure the Preview box is checked.
If your picture is underexposed, there may be a lack of contrast, or difference between dark and light values, in your picture. Drag the Contrast slider to the right to improve the contrast and sharpness of the photo. If you find the colours are too harsh, your contrast may be too high.

If your picture seems to dark, or you are having trouble making out some details, the brightness of your picture may be too low. Drag the Brightness slider to the right to increase the brightness. Click OK.

6**. View the Picture at Actual Size.**
Look at the title bar of the image you're working on. It may read something like this: "_____.jpg @ 25%" (Your figure may be different, depending on your photograph). This means that you are now viewing your image at only one-quarter, or 25%, of its actual size. To see the actual size of your image, go to View > **Actual Pixels**, or press Ctrl + Alt + 0 (zero).

As you can see, the picture is much larger than you think it is! If you uploaded this picture to your webpage now, it would display at this size, which is much too large.

7. **Resize your image.**
Go to Image > Image Size. A box will appear showing your Pixel Dimensions. This is the number of pixels your picture measures across (Width) and down (Height). A typical size for web images is 640 pixels across x 480 pixels down.

Tip: if the picture is vertical, the dimensions will be 480 pixels across x 640 pixels down.

Enter 640 in the 'Width' box. You should see the number in the 'Height' box change automatically. This is due to the little chain icon you see connecting the boxes, which ensures that the size of the image is adjusted proportionally so that the image does not appear stretched or squished. If you don't see the chain icon, be sure that the 'Constrain Proportions' checkbox is checked.

The Resolution of your picture will also be displayed. For Web images, the resolution of your picture should not go below 72 pixels per inch.

Click OK.
Your image may still be too large. Keep resizing your image until you have adjusted it to the desired size.

8**. Save your image.**

Your image should now be as you want it to be. Save your image by going to File > Save As. It is important you click Save As… to save under another file name, so that your original, untouched image is preserved.

Create a new folder for your edited images, separate from your original folder. If you are editing images from many different sources, it is important to keep them organized so they can be easily found later.

Name your file with a descriptive title. It is best not to keep names like 'DSC00001' as this makes them difficult to find.

IMPORTANT: when you name your pictures for the web, make sure there are NO spaces, slashes, punctuation marks or mathematical signs in your file name. These can cause the image to not display correctly in the browser.

In the Format menu, select JPEG. Click OK. The JPEG Options box will appear. Adjust the image quality by either entering a number from 1-12 (where 1 is the lowest quality and 12 the highest, selecting an option from the Quality box, or dragging the slider. You will see the file size change at the bottom of the box. Aim for a size below 50 Kilobytes or lower. Keep in mind, though, that the smaller the file is, the lower the quality will be. At very low quality, the image can look quite degraded. Try to balance image size and quality for best results.

Click OK.

9. You're done!